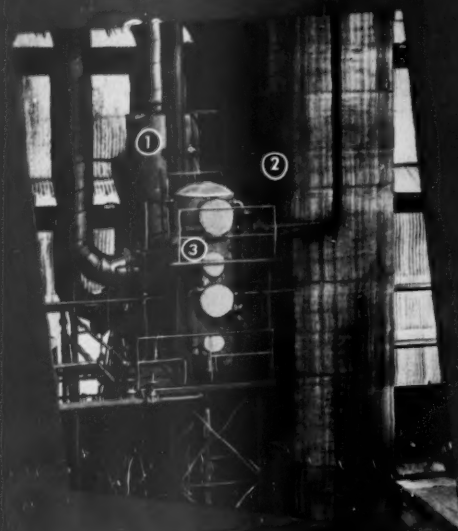
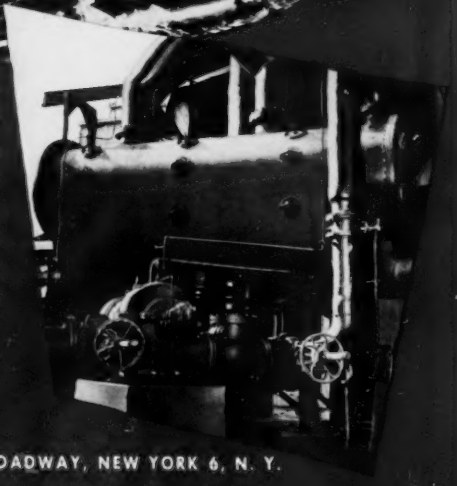
harnessing HEAT DOLLARS *at St. Regis*

with FOSTER WHEELER BLOWDOWN RECOVERY SYSTEMS



At the St. Regis Paper Mills in Pensacola, Florida, two types of blowdown recovery systems are in operation. In the Vapor-to-Liquid System *(left)* steam is condensed in the atmospheric condenser (1) and hot condensate is stored in the accumulator tank (2). This condensate, contaminated by some black liquor and pulp, is flashed under vacuum and the resultant clean vapors heat mill water in the tubes of the flash heater (3).

In the Surface Condenser *(below)* mill water flowing through the tubes is heated by steam condensing in the shell. The expansion chamber at vapor inlet prevents pulp from reaching tube bundles.



Properly engineered recovery equipment not only costs you less in the long run but increased operating efficiency and large fuel savings may also be enjoyed from the outset.

If you are contemplating improvements at your mill, our specialists on pulp and paper mill equipment will be glad to help you with your engineering problems.

Foster Wheeler Blowdown Recovery Systems are discussed in the May, 1950 issue of *Heat Engineering*. Write for a copy.

FOSTER WHEELER CORPORATION • 165 BROADWAY, NEW YORK 6, N. Y.

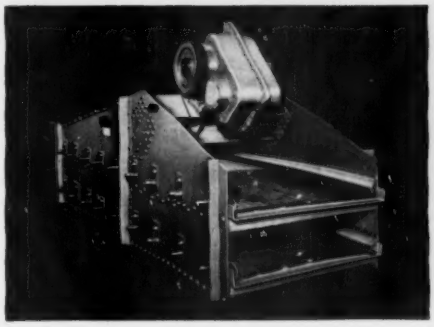
FOSTER WHEELER

PULP & PAPER, May, 1951. Vol. 25, No. 5. Published monthly, except June, when publication is semi-monthly, at 124 West Fourth St., Los Angeles 13, California. Executive, Advertising and Editorial Offices, 71 Columbia St., Seattle 4, Washington. Subscriptions: U. S. and Canada, $3.00; other countries, $4.00. Entered as second class matter at Los Angeles, California. Postmaster: Please send Notice 3579 to PULP & PAPER, 71 Columbia St., Seattle 4, Washington.

WHICH CHIP SCREEN Can You Use?

LOW HEAD

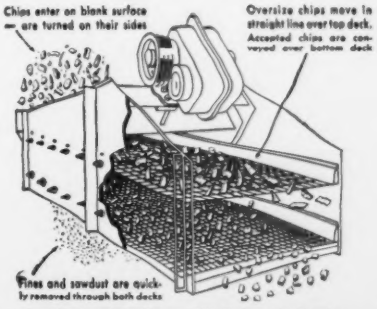
For High Capacity and Efficiency



IF YOU WANT highest percentage of uniform size chips, then you'll want to specify *Low-Head* screens. Actual mill experience shows that *Low-Head* screens will give you closer separation than *any comparable screen on the market!*

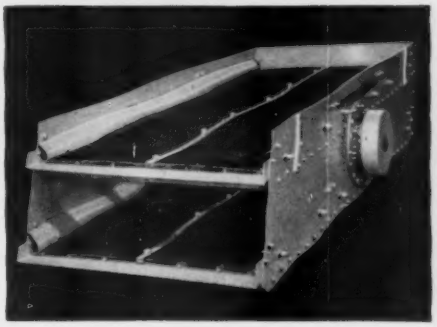
The secret is in the motion . . . chips are moved in a single direction on their sides. Long slivers will not turn on end.

And *Low-Head* screens are easy to install. They save space and headroom because they operate horizontally. They can be cable suspended or base rubber mounted.


Chips enter on blank surface — are turned on their sides
Oversize chips move in straight line over top deck. Accepted chips are conveyed over bottom deck
Fines and sawdust are quickly removed through both decks

RIPL-FLO

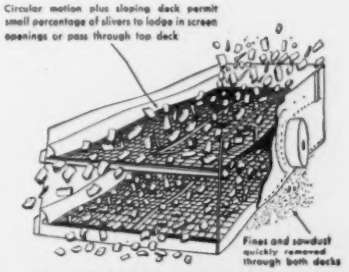
For Lowest First Cost



IF YOU HAVE ample head room, then *Ripl-Flo*, circle motion, inclined screens will save you money.

Operators report that *Ripl-Flo* screens require practically no maintenance . . . yet *cost less* and do as *good* or a *better job* than any comparable size inclined screen on the market!

For the complete story on A-C chip screens, including specifications and dimensions, check your needs in the coupon below.


Circular motion plus sloping deck permit small percentage of slivers to lodge in screen openings or pass through top deck
Fines and sawdust quickly removed through both decks

Low-Head and Ripl-Flo are Allis-Chalmers trademarks.

A-C ALLIS-CHALMERS

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Low Head Pulp and Paper Screens 07B6592

Chip Screens - - - - - 07B6353

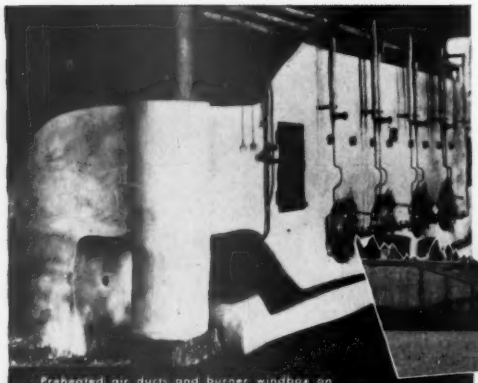
Name .....

Title .....

Firm .....

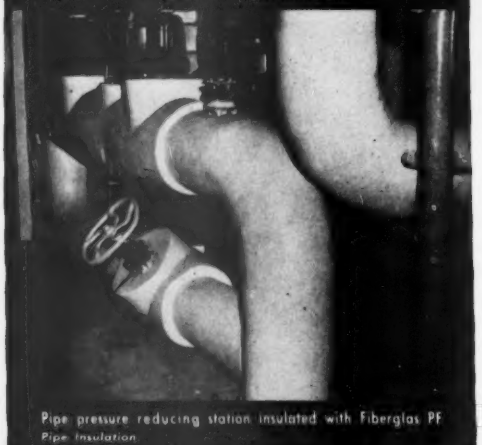
Address .....

City State A-3360



Preheated air ducts and burner windbox on VUX boiler insulated with Fiberglas MM Blanket Insulation.

Installation: **NANIAMO PAPER MILL**
Naniamo, B.C., Canada



Pipe pressure reducing station insulated with Fiberglas PF Pipe Insulation

Ducts over Flakt dryer insulated with Fiberglas PF Insulation covered with canvas

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. . . High Thermal Efficiency
. . . Moisture Resistant

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- **Non-corrosive**
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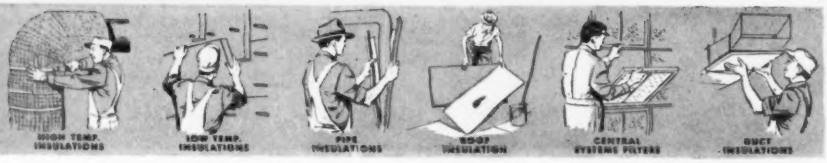

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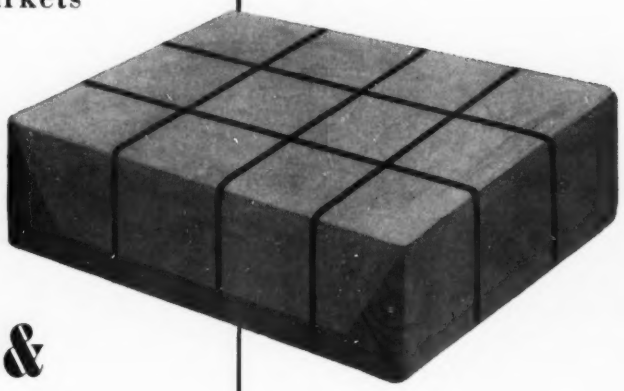

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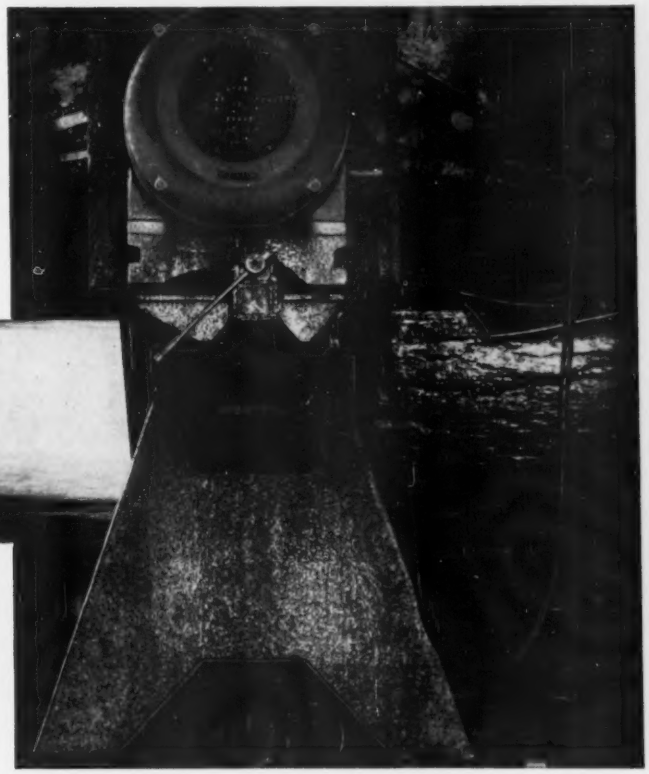
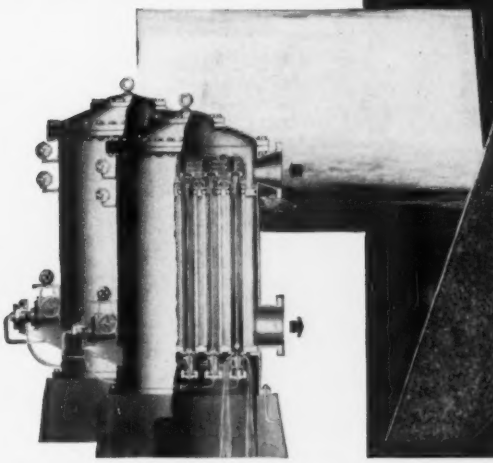
If you would convert water – your cheapest raw material – into an efficient production tool for pulp, paper, and saw mills, it will pay you to investigate the R. P. Adams line of water filters now.

Send today for new 20-page, file size Bulletin No. 691 on Water Filtration in the Pulp and Paper Industry.





ADAMS AWF WATER FILTERS

HANSEL 60" RING BARKER

R. P. ADAMS CO., INC.

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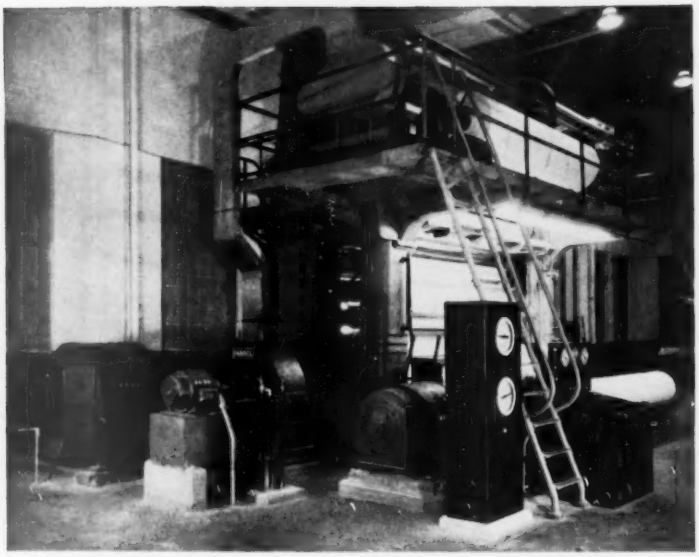

FASTER SUPER-CALENDERING!

G-E supercalender drives keep your supercalender ahead of your paper machine by providing faster, smoother acceleration and deceleration to increase your daily output and minimize paper breaks. Uniform threading speeds reduce setting-up time to a minimum. Quick emergency stopping minimizes costly damage to calender rolls. Centralized control simplifies supercalender operation. In this Maine paper mill, the supercalender, unwind and windup units are all electrically driven, automatically holding desired sheet tension.

Get the finished

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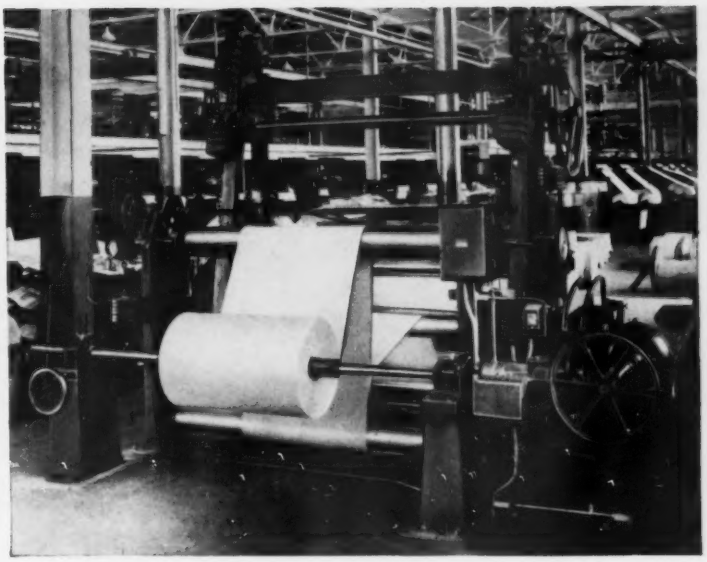
Keeping speeds in step for an entire converting machine from one control point, G-E packaged Speed Variator drives assure faster acceleration, fewer breaks, less waste and time lost. The Speed Variator unit, with motor-generator and a-c and d-c control in a compact package, cuts installation cost, makes future converting-room rearrangement easier and less costly. The G-E co-ordinated drive for this 78-inch double-deck corrugating machine uses centrally-controlled individual d-c motors to drive corrugating rolls, adhesive rolls, straw board feeder, adhesive glue roll, and double-facer roll.

GENERAL ELECTRIC

655-8

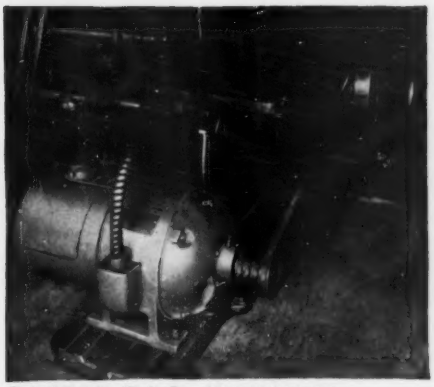
FASTER REWINDING!

Complete, accurate control of sheet speed and tension—for more rolls per day—is provided by G-E rewinder drives. Threading, running speeds and stopping are faster, and every roll is wound to the hardness you want. Soft starts reduce paper breaks. In addition, in this slitting-rewinding operation, G-E side-register control maintains accurate register continuously, automatically—reducing trim waste, increasing production. Spoilage in other finishing-room operations is also reduced by G-E cut-off and color register controls.



paper—faster!

General Electric drives for paper finishing and converting—individually engineered to your needs—can help you step up production—meet customer specifications more economically!

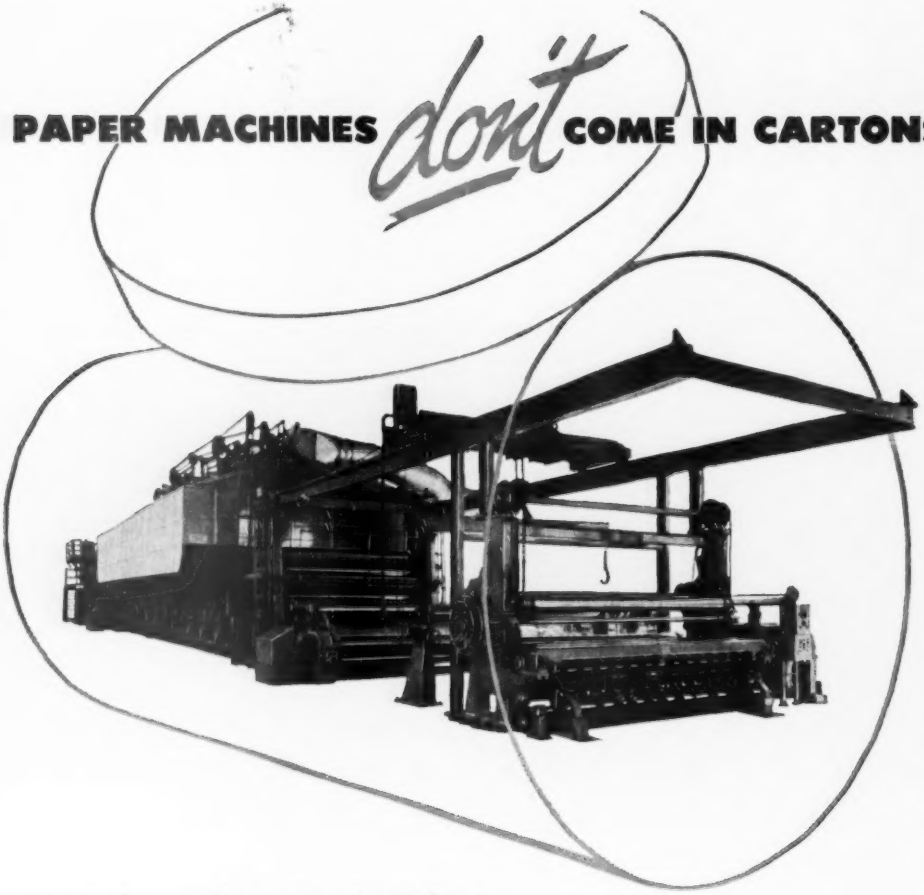


FASTER BAG-MAKING!
Driving a bag-printing machine, this 5-hp G-E Type ACA induction motor is only one of many G-E single-motor adjustable-speed drives that help speed up operations on cutters, conveyors, packaging machines, etc.

In papermaking, every step is important, but the pay-off is in the finishing room! And that's where—to help you maintain top customer satisfaction—General Electric offers you the broadest range of dependable electric equipment to meet your every finishing-room need. Engineered to your individual requirements by experienced industry specialists, it's also backed by quick, on-call service from any of 30 service shops to keep your output uninterrupted. With this G-E team helping you, you boost finishing-room output—meet your customers' quality specifications in less time and at lower cost. Find out from your G-E representative—soon! *General Electric Company, Schenectady 5, N. Y.*

CO-ORDINATED DRIVES
for Paper Finishing and Converting

PAPER MACHINES *don't* COME IN CARTONS...



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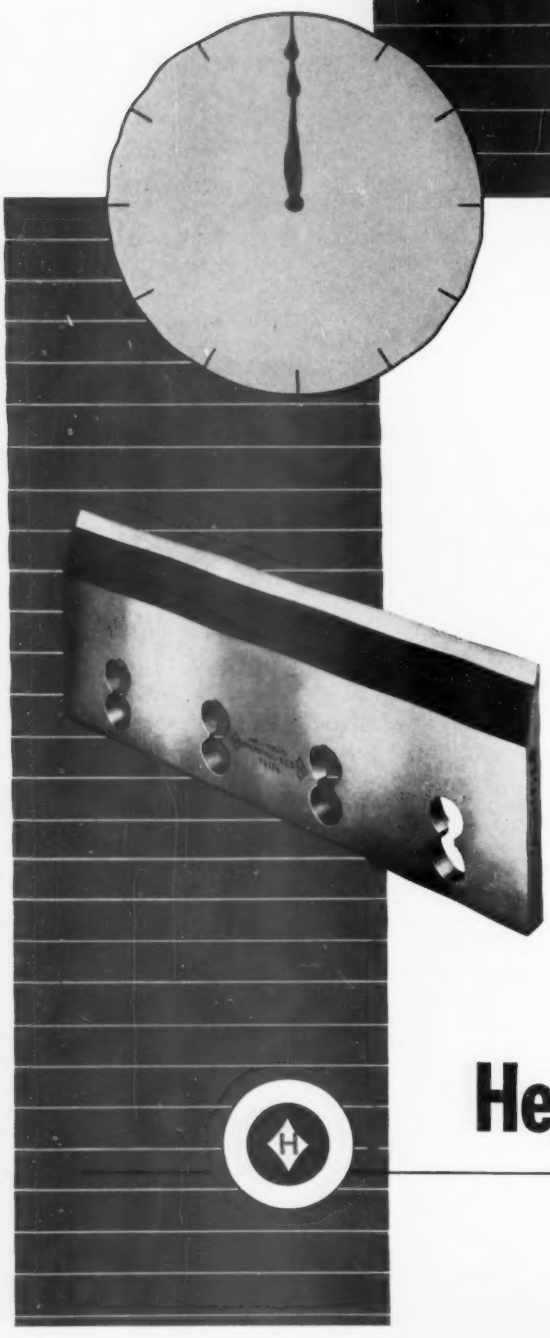
How to cut down on chipper "Down-Time"



You can obtain more hours of continuous operation . . . eliminate frequent chipper "shut-downs" . . . guarantee a steady flow of uniform chips by installing Heppenstall Knives in your chipper.

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Heppenstall E. I. S. CHIPPER KNIVES

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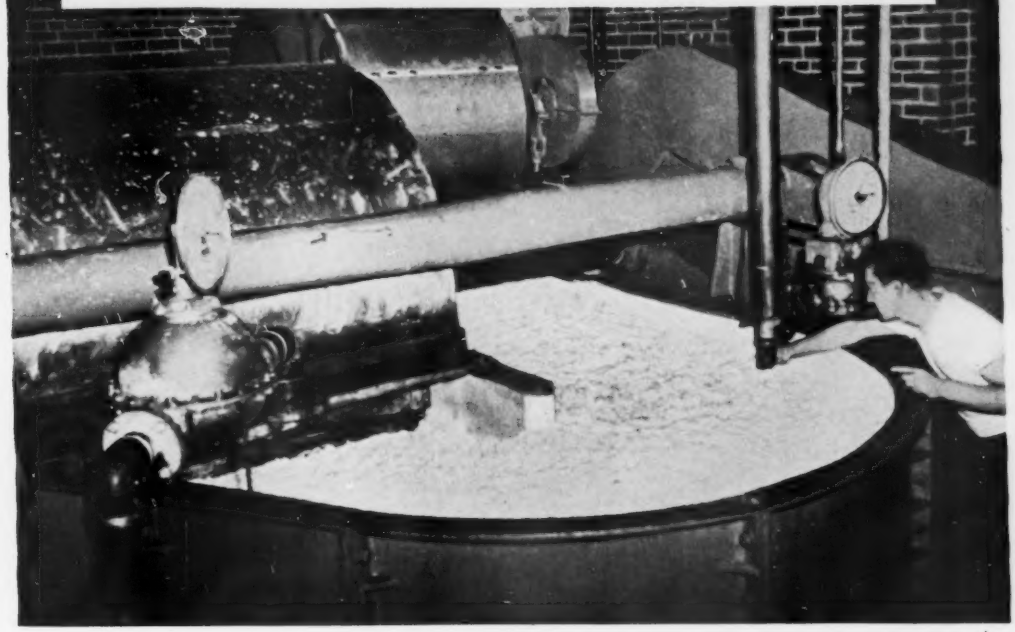

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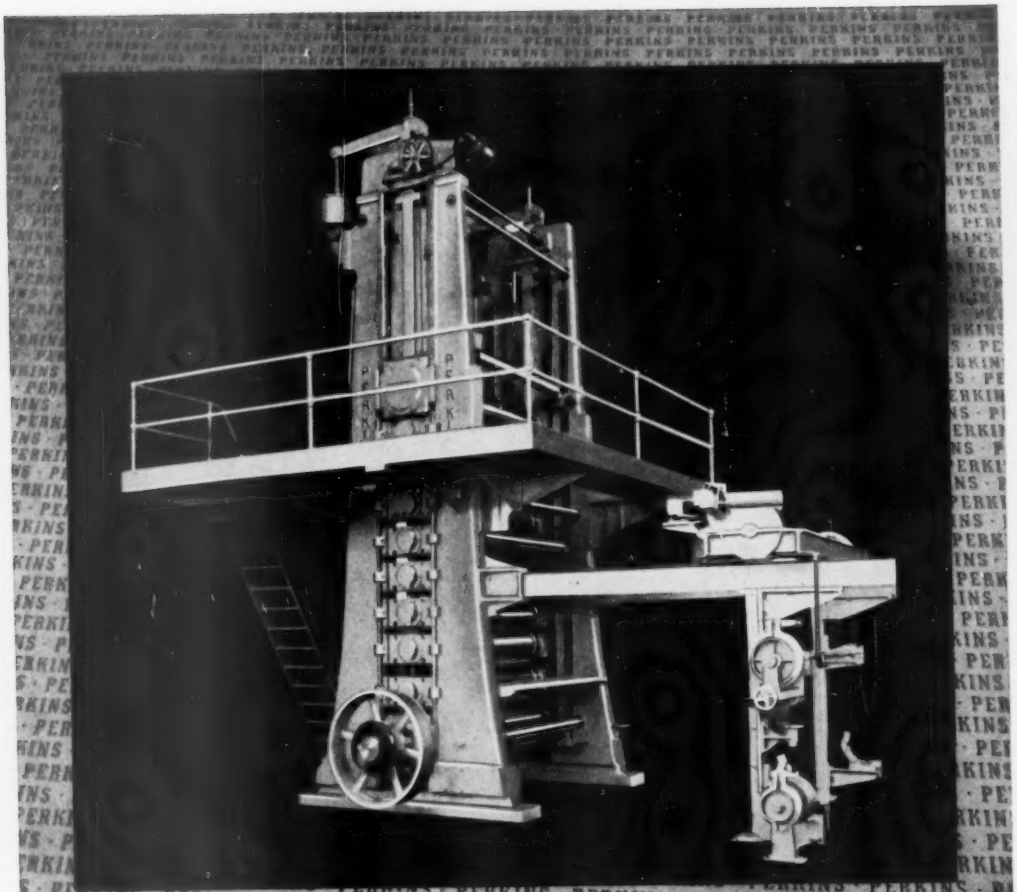

TEN TO FOURTEEN

Perkins ten-roll 64" face Web Supercalender with provision for fourteen (14) rolls.

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- Stationary reel with electric hoist
- Lever pressure with pneumatic loading
- Fly rolls mounted in self-aligning anti-friction bearings
- Motor driven hoist for raising and lowering rolls

B. F. PERKINS & SON, Inc.

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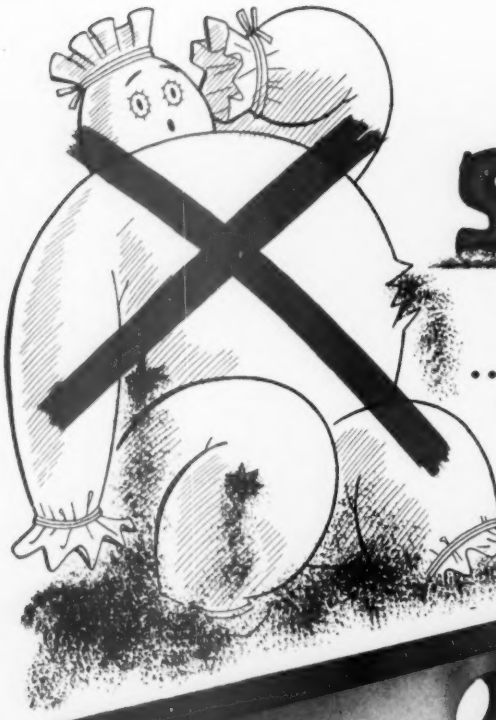
PULP DIVISION

WEYERHAEUSER



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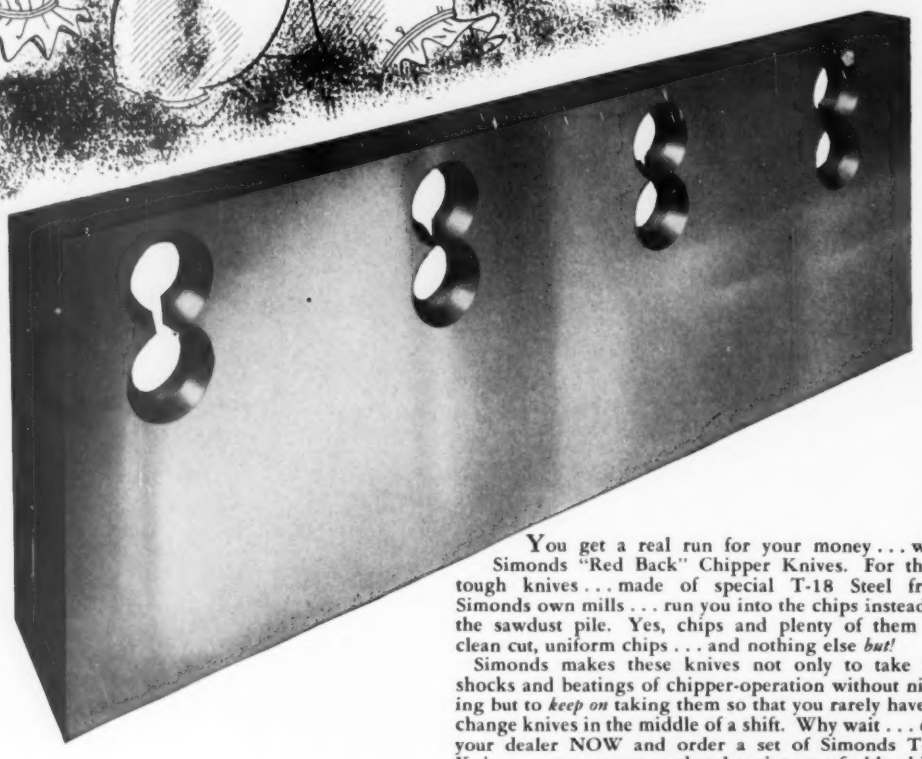
SAWDUST

Eat Into Your Profits!

...equip your CHIPPERS with TOUGH T-18 KNIVES



You get a real run for your money... with Simonds "Red Back" Chipper Knives. For these tough knives... made of special T-18 Steel from Simonds own mills... run you into the chips instead of the sawdust pile. Yes, chips and plenty of them... clean cut, uniform chips... and nothing else *but!*

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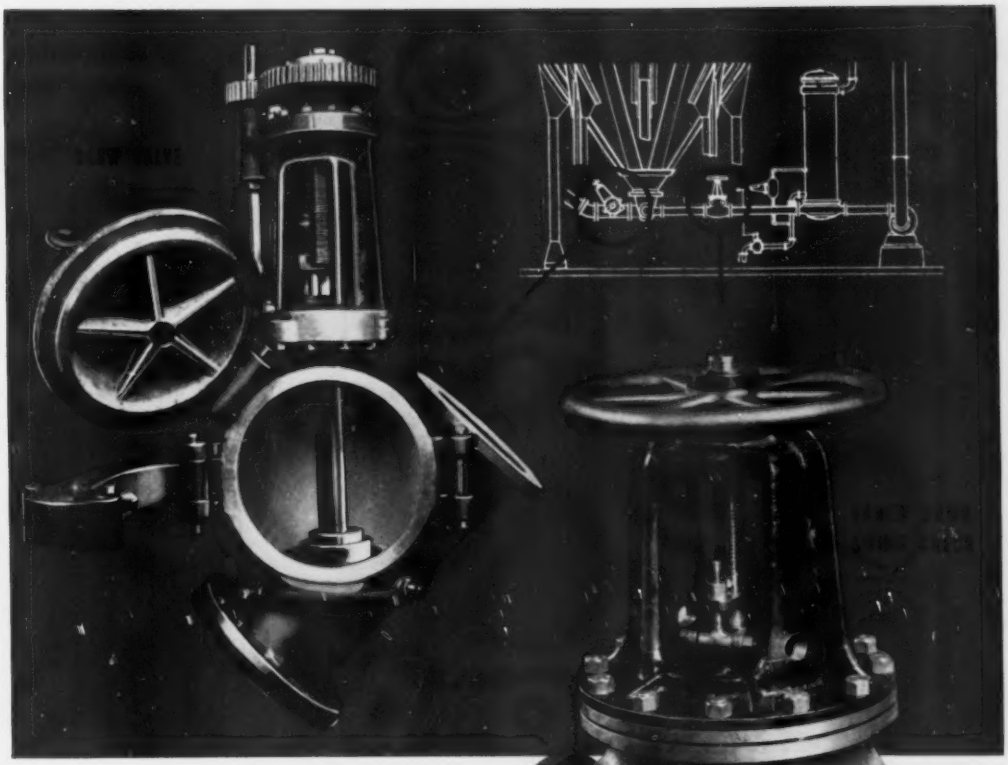
SAW AND STEEL CO.

Branch Offices in Boston, Chicago, San Francisco and Portland, Ore. Canadian Factory in Montreal, Que.



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Designed especially for rigorous pulp mill service, these valves are built to

Resist corrosion, abrasion, vibration and shock

Operate with minimum maintenance

Give positive shut-off

Promote unobstructed flow

The Screw down swing check valve operates as a freely flowing swing check, or it can be screwed down to throttle or stop flow. Sizes from 4 to 12 inches.

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Company_____

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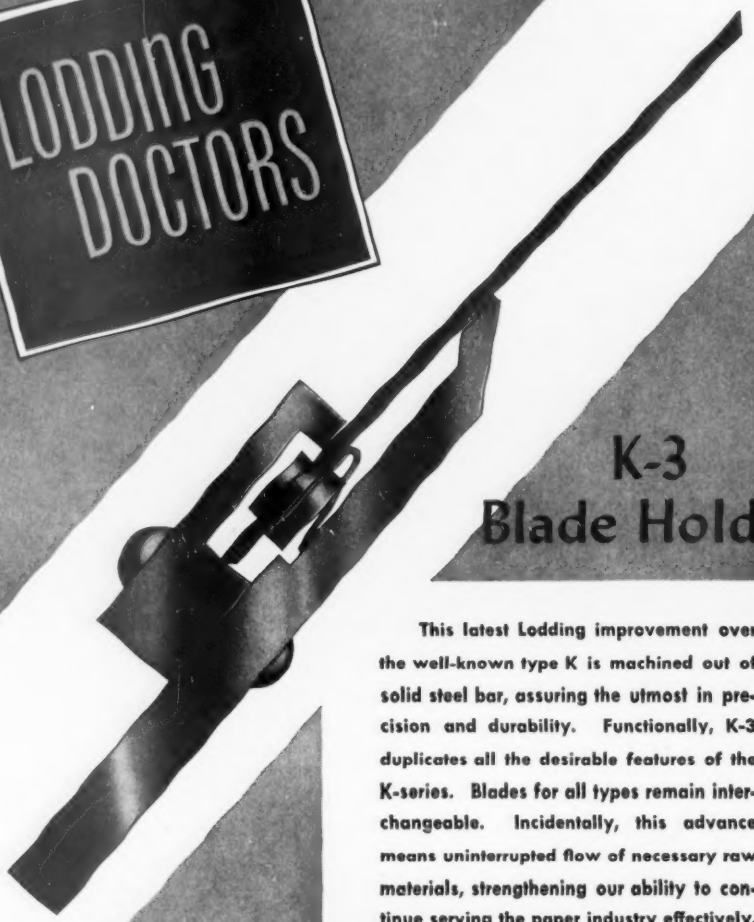
IN CANADA — *ESCO* LIMITED, VANCOUVER, B.C.

Dealers in all Principal Cities

LODDING DOCTORS



K-3
Blade Holder

This latest Lodding improvement over the well-known type K is machined out of solid steel bar, assuring the utmost in precision and durability. Functionally, K-3 duplicates all the desirable features of the K-series. Blades for all types remain interchangeable. Incidentally, this advance means uninterrupted flow of necessary raw materials, strengthening our ability to continue serving the paper industry effectively.

LODDING ENGINEERING CORPORATION
WORCESTER, MASSACHUSETTS
REPRESENTED BY
W. E. GREENE CORPORATION • WOOLWORTH BLDG., NEW YORK

for high efficiency in bleaching

• • • You get whiter, better pulps and papers with BECCO bleaching processes.

BECCO processes have been developed to make the most efficient use of the bleaching qualities of BECCO Hydrogen Peroxide. BECCO Hydrogen Peroxide 50% is a safe, mild, fully effective bleaching agent.

Years of research, years of successful field experience with users of BECCO processes and BECCO Peroxygen chemicals . . . laboratory and pilot plant facilities at our plant in Buffalo . . . make BECCO a leader in the field of pulp bleaching.

Important to you . . . the active cooperation of BECCO representatives . . . specialists in pulp bleaching processes. Let us know if they can be of help.

GROUNDWOODS
SULFITES
SEMI-CHEMICALS
KRAFTS (SUPER BLEACHING)
AGRICULTURAL RESIDUES

use BECCO bleaching processes

Among users of BECCO Peroxygen Chemicals and BECCO bleaching processes are: St. Regis Paper Co., Escanaba Paper Co., Diamond Match Co., Blandin Paper Co., Finch, Pruyn & Co., Inc., Westminster Paper Co., Ltd.

BECCO SALES CORPORATION
Sales Agent for Buffalo Electro-Chemical Company, Inc., Buffalo 7, N. Y.
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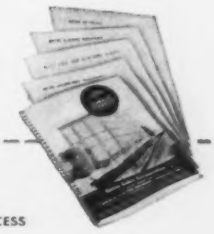


BECCO SALES CORPORATION, Buffalo 7, N. Y.

Please send me literature on:

(P-2).....BECCO COLD STEEP BLEACHING PROCESS
(P-1).....Pulp Bleaching with Hydrogen Peroxide
(P-3).....Peroxide De-inking
(P-4).....Glassine Bleaching
(P-5).....BECCO Laboratory Bleaching Methods

Name.....Title.....

Company.....

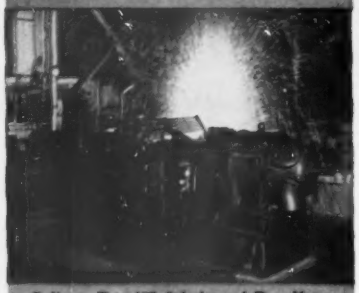
Address.....

City.....Zone.....State..... PP-5-51

For the toughest jobs in your mill . . . choose

THE TOUGHEST MOTORS EVER BUILT!

Heavy Duty Type "T" D-c. Motors help keep tonnage up on this high-speed 236" newsprint machine. Reliance Regulators maintain the precise speed relationships required between sections of the machine.



Reliance Type "T" Splash-proof D-c. Motors provide dependable power for shaft tumblers in modern tube mills.

On continuous miners, specially designed Reliance Type "T" D-c. Motors provide greater horsepower in the limited space available than ever before attained.

RELIANCE *TYPE 'T'*
HEAVY DUTY D-C. MOTORS

Wherever motors must meet rugged service requirements, Reliance Type 'T' Heavy Duty D-c. Motors are right in their element! Designed, engineered and constantly improved to satisfy the requirements specified by users, these dependable motors have proved their amazing endurance in paper mills, in steel mills, in underground mines and in countless other industrial applications.

All-steel frames give maximum strength. Other features: thorough insulation of armatures and field coils by Reli-X varnish treatment; exrta-strong commutators to assure capacity for overloads of current and speed; cast bronze brush holders to provide and maintain accuracy for peak performance; precision bearing design . . . "you can't grease 'em wrong". Write today for Bulletin C-2001 containing complete data on these rugged, heavy duty Type 'T' D-c. Motors available from 3/4 to 1000 horsepower for constant or adjustable speed operation.

Sales Representatives in Principal Cities

RELIANCE ELECTRIC AND ENGINEERING CO.

"Motor-Drive is More Than Power" • 1105 Ivanhoe Road, Cleveland 10, Ohio

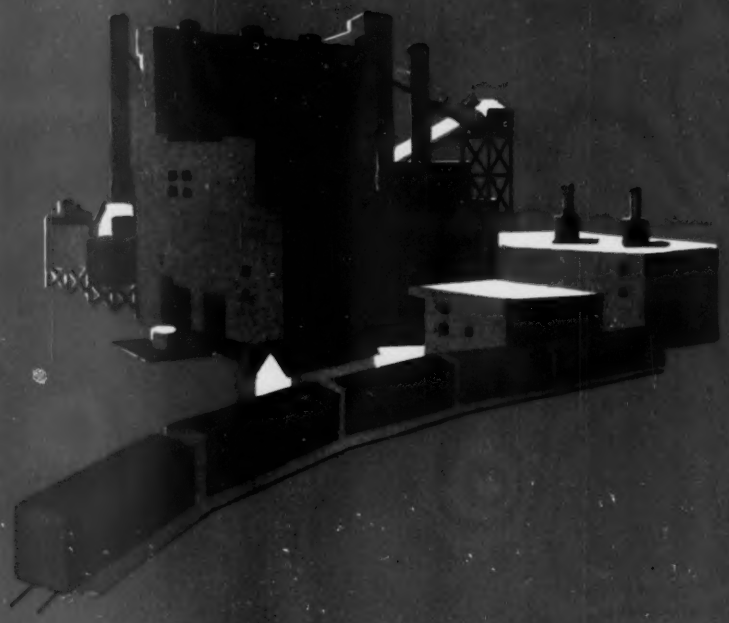
THE MEAD SALES COMPANY
230 PARK AVENUE, NEW YORK 17, N. Y.
20 NORTH WACKER DRIVE, CHICAGO 6, ILL.

MEAD
pulp

DISTRIBUTORS OF WOOD PULP
BLEACHED AND UNBLEACHED
CHEMICAL AND MECHANICAL WOOD PULP

"PUT IT OUT!"

A reproduction of this incident from the fabulous life of Paul Bunyan—the fifty-eighth of a series—will be sent on request. It will contain no advertising.



OUTSTANDING WESTERN SOURCE

Puget Sound Pulp and Timber Company is a large producer of bleached sulphite wood pulp, with a daily capacity of three hundred and seventy-five tons of this product.

PUGET SOUND

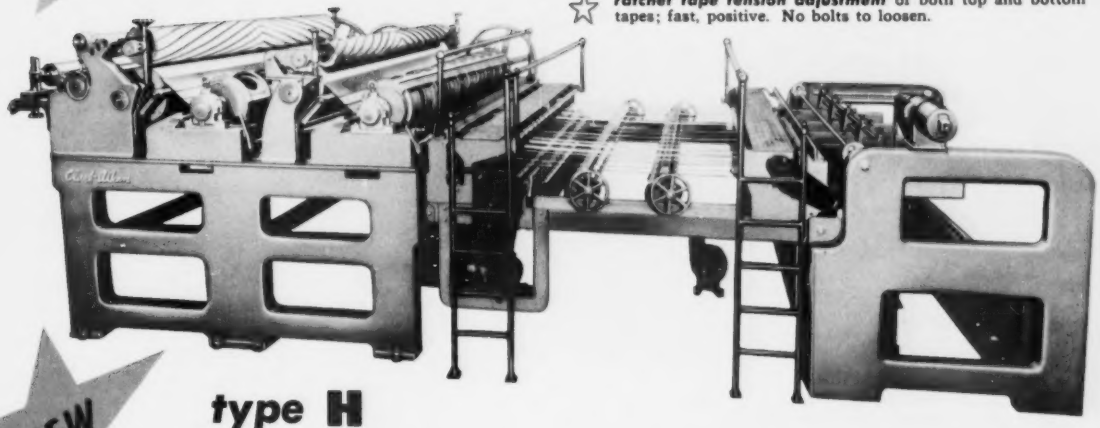
PULP AND TIMBER COMPANY

BELLINGHAM • WASHINGTON

the sheeter you've wished someone would build

star-studded with *NEW* cost-cutting efficiency features

- ***oversize pinch roll,*** 12" diameter, gives more gripping surface to prevent slippage.
- ***sand-blasted draw roll,*** a Clark-Aiken innovation, reduces possibility of slippage; 18" diameter.
- ***pinch roll adjustable*** in three positions to increase drawing power for multiple sheeting.
- ***one-piece knife assembly,*** bed knife and cylinder housings, prevents distortion when squaring sheet.
- ***lifetime tapes,*** 4" wide and much heavier, wear indefinitely, stretch less.
- ***ratchet tape tension adjustment*** of both top and bottom tapes; fast, positive. No bolts to loosen.



NEW

type H *Clark-Aiken*

High-Speed Heavy-Duty

CUTTER-LAYBOY UNIT

for Board, Pulp, Multiple Sheeting

drawing from as many as 32 rolls of 8-pound paper at one time.

- ***scale slitter and jogger adjustment*** permits positive, accurate alignment without tape measure.
- ***independent-motor-driven cam-operated joggers*** with oilite bearings for smooth, quiet operation.
- ***independent-motor-operated chain-and-sprocket lowering device,*** electronically controlled. No worn or bent screws. Faster return.
- ***unit design*** — cutter, delivery, layboy coordinated for unit operation. Heavy, box-type end frames, large-section rolled steel shapes, oversize roller bearings throughout, for smooth, vibrationless operation.

plus these ever-popular Clark-Aiken features:

Patented Scissors-Action "Spiral Shear" Knife; Infinite Sheet Length Range within cylinder capacity; Infinite Paper Travel Speed, 0 to 800 feet per minute; Adjustable Lead-In Rolls take curl and wrinkle out of sheets before slitting; Ball-Bearing Shearing-Type Slitters; Adjustable Take-off Tapes; Variable Overlap up to 8 to 1; Adjustable Tape Grip.

Available in Simplex and Duplex types — 76 to 220 inches maximum width capacity—with standard 18" or 25" knife cylinder. Write for Bulletin H.

NEW

overhanging-type layboy

now available for all Clark-Aiken Cutters, permits side pile removal, greater pile height, fast skid removal and replacement.

THE *Clark-Aiken* COMPANY

LEE, MASSACHUSETTS

Pump Heavy Stock with No Dilution . . No Thickening

THIS STOCK PUMPING COMBINATION of the *Hi-Density* Feeder and the Allis-Chalmers PW paper stock pump saves money on stock pumping three ways:

1) Eliminates need for diluting stock for pumping and subsequent thickening for processing.

2) Saves expense of manufacturing and handling wet lap for thickening.

3) Stock can be stored at higher consistence and pumped to the beaters at desired consistence.

The *Hi-Density* Feeder is a shaft and multiple vane assembly that is installed in the stock chest. It feeds pulp as thick as 8% bone-dry consistence into the pump suction. The PW pump can easily handle this stock once it has been fed into the suction.

The PW pump is especially designed for paper stock handling. It has a non-clogging type impeller and is available in several special alloys to suit every type of paper making application. The entire rotating element can be removed in 5 minutes without disturbing the suction or discharge piping.

For help on your stock pumping problems — or on any of the many other paper making processes for which A-C manufactures equipment — call your nearby Allis-Chalmers Sales Office or write Allis-Chalmers, Milwaukee 1, Wis. Ask for Bulletins 08B7112 and 08B6725.

A-3321

Hi-Density, Texrope and Streambarker are Allis-Chalmers trademarks.

MOTORS

STREAMBARKER

TEXROPE V-BELT DRIVES

VIBRATING SCREENS

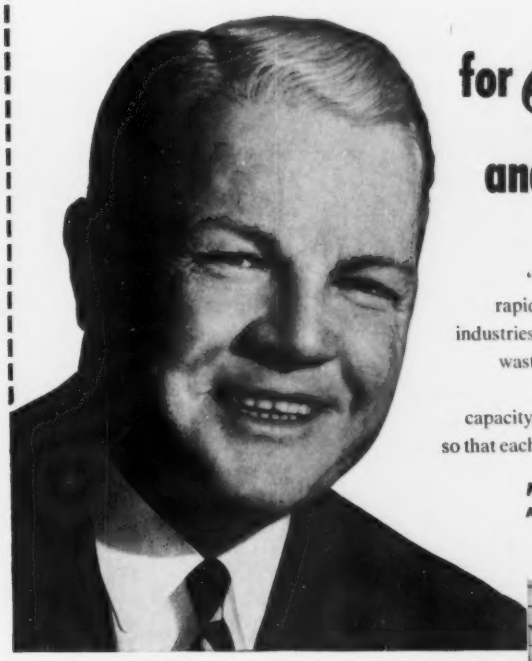
HI-DENSITY FEEDER

ROTARY KILNS

AND OTHER EQUIPMENT FOR PAPER MAKING . . .

A-C ALLIS-CHALMERS

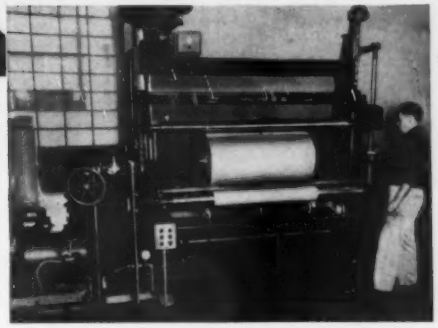
ALLIS-CHALMERS



for *extra* capacity and *extra* precision!

"EVERYONE KNOWS that production problems are rapidly mounting in the paper making and printing industries. Now, more than ever before, we can't afford to waste either time or materials. The recent addition of new equipment to our plant provides that *extra* capacity which is needed to keep a step ahead of the pace—so that each job can be handled with *extra* care to avoid waste."

Mr. Arthur G. Nelson, President
A. G. Nelson Paper Co., Inc., New York, N. Y.



The Camachine Type 10 Model 04 slitter rewinder recently installed at A. G. Nelson Company is equipped with: Camachine 1B-PMR pneumatic mill-roll stand; electric riding roll lift; and Pneucut® patented pneumatic slitter units. Handles 72" rolls at 2000 feet per minute. Rewound diameters to 40".

*Trade name reg. U. S. Pat. Off.

NELSON's reputation has been built through more than thirty years of service in supplying accurately rewound paper rolls and sheets for the printing industry of Metropolitan New York. The A. G. Nelson plant, completely equipped with modern slitting, rewinding and sheeting equipment, also serves as a finishing room for paper mills.

High-speed web-fed printing presses call for absolutely true slitting and rewinding to assure the uniform web tension which minimizes web breaks, and to provide more accurate lengthwise and sidewise register on the travelling web. Because they are backed by more than thirty years of know-how in roll production it is not surprising to find the A. G. Nelson Company plant equipped exclusively with *Camachine* slitters and rewinders.

Over the years *Camachine* has proved to be the *one* outstanding name in roll production equipment . . . for rubber, textiles, plastics and other materials, as well as for paper and paper board. No matter what material you produce or convert in roll form, it will pay you to consult with *Camachine* engineers regarding faster production and improved roll quality.

Cameron Machine Co., 61 Poplar St., Brooklyn 2, N.Y.

They can depend on Camachine

AA-238

PACIFIC COAST SUPPLY COMPANY • PUBLIC SERVICE BUILDING, PORTLAND 4, ORE. • 260 CALIFORNIA ST., SAN FRANCISCO 19, CAL.

Govan, Ferguson, Lindsay, Kaminker, Maw, Langley and Keenleyside, Architects

THE HOSPITAL FOR SICK CHILDREN

EQUIPPED FOR MODERN MIRACLES

Stone & Webster Engineering Corporation was retained as Project Manager during the planning stage of the Hospital for Sick Children in Toronto and later supervised and directed the construction. This hospital provides the most modern facilities for the care of sick children and for medical research and instruction.

STONE & WEBSTER ENGINEERING CORPORATION

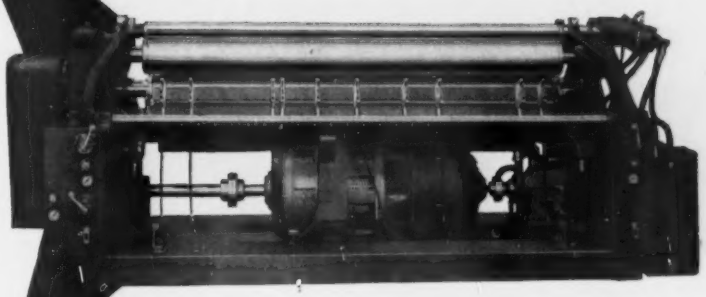
A SUBSIDIARY OF STONE & WEBSTER, INC.

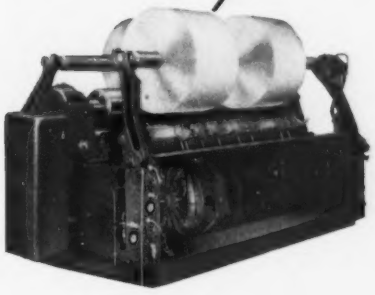
HERE IT IS!

the new B & S duplex REWINDER

OUTSTANDING FEATURES:

- Simplicity of design
- Variable-speed Drive
- High speed (up to 1500 ft. p.m.)
- Compact—saves space
- Vibrationless
- Hydraulically driven differential Rewind Shafts
- Air-Operated Slitters for strips as narrow as ½ inch
- Accurate pressure control between Drum and Rewind Shafts
- All hydraulic and air Piping enclosed in Frame
- All Controls easily accessible
- Ease of operation and maintenance
- Efficient and economical





The new B & S #15 Duplex Rewinder is powered by a Louis Allis Eddy Current Type Variable-speed Drive. A variable volume pump driven by an A. C. motor supplies power to the rewind shafts, and the winder is powered by the Eddy Clutch. By placing the entire drive beneath the machine, B & S designers have saved valuable floor space.

Accurate pressure control and precision winding are achieved by pneumatic cylinders for raising and lowering the rewind arms. For full center winding rewind shafts can be locked in "out" position.

To eliminate all possible vibration, the B & S Duplex Rewinder is mounted on heavy cast-iron bedplate. Fully enclosed piping and easily accessible controls assure smoothness and efficiency in operation, as well as ease and economy in upkeep.

For further details write to The Bagley & Sewall Company, 500 Fifth Avenue, New York 18, N. Y.

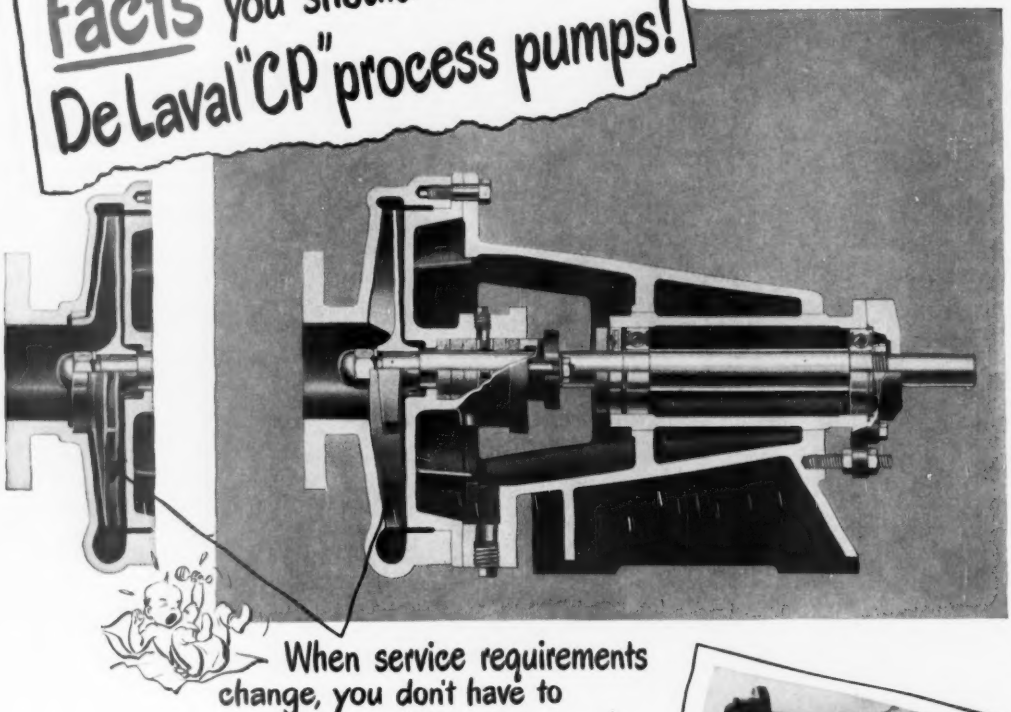
designers and builders of

BAGLEY & SEWALL
WATERTOWN, NEW YORK

PAPERMAKING MACHINERY
SINCE 1853

500 FIFTH AVE., NEW YORK 18, N. Y.

Facts you should know about De Laval "CP" process pumps!

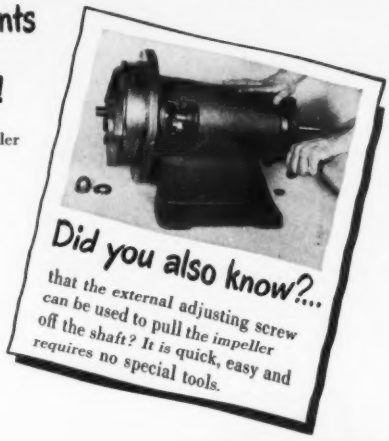


When service requirements change, you don't have to buy a whole new pump!

The De Laval CP pump can be quickly converted from closed to open impeller (or vice versa) by changing the pump volute and impeller only. This standardization also means you can keep your stock of spare parts to a minimum. Three sizes of shafts, shaft lock-nuts, bearings, bearing cartridges and pedestals *fit all nine sizes of De Laval CP pumps.*

Shims and fussy fits are old fashioned...

When you have to compensate for wear between the impeller and case, it is only necessary to face off these parts, reassemble the pump and position the impeller with the external adjusting screw provided for that purpose. No shims required—no fussy fits.



Did you also know?...

that the external adjusting screw can be used to pull the impeller off the shaft? It is quick, easy and requires no special tools.

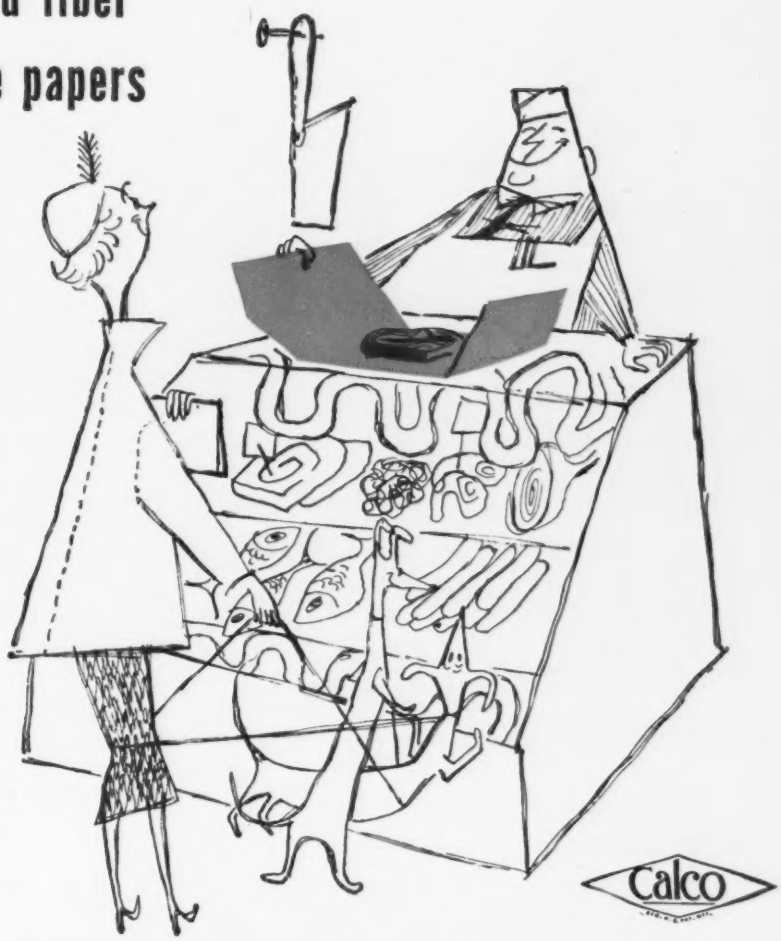
DE LAVAL STEAM TURBINE CO., TRENTON 2, N. J.

TURBINES • HELICAL GEARS • CENTRIFUGAL BLOWERS AND COMPRESSORS
CENTRIFUGAL PUMPS • WORM GEAR SPEED REDUCERS • IMO OIL PUMPS

50th DE LAVAL Anniversary

CPP-5

for red fiber in granite papers



PHENO FAST SCARLET 4BNC

Excellent solubility, good tinctorial value and fastness to light, acid, silicate and alkali make Calco PHENO FAST SCARLET 4BNC one of the finest and brightest of the Direct Scarlets.

PHENO FAST SCARLET 4BNC imparts good color to many types of red papers, and it is especially recommended for producing red fiber for granite papers such as butcher's wrap. It is suitable for coloring papers which are to be treated with melamine wet-strength resins.

Your Calco representative is available to assist you with paper-coloring problems and to make recommendations from Calco's wide range of dyes for paper.

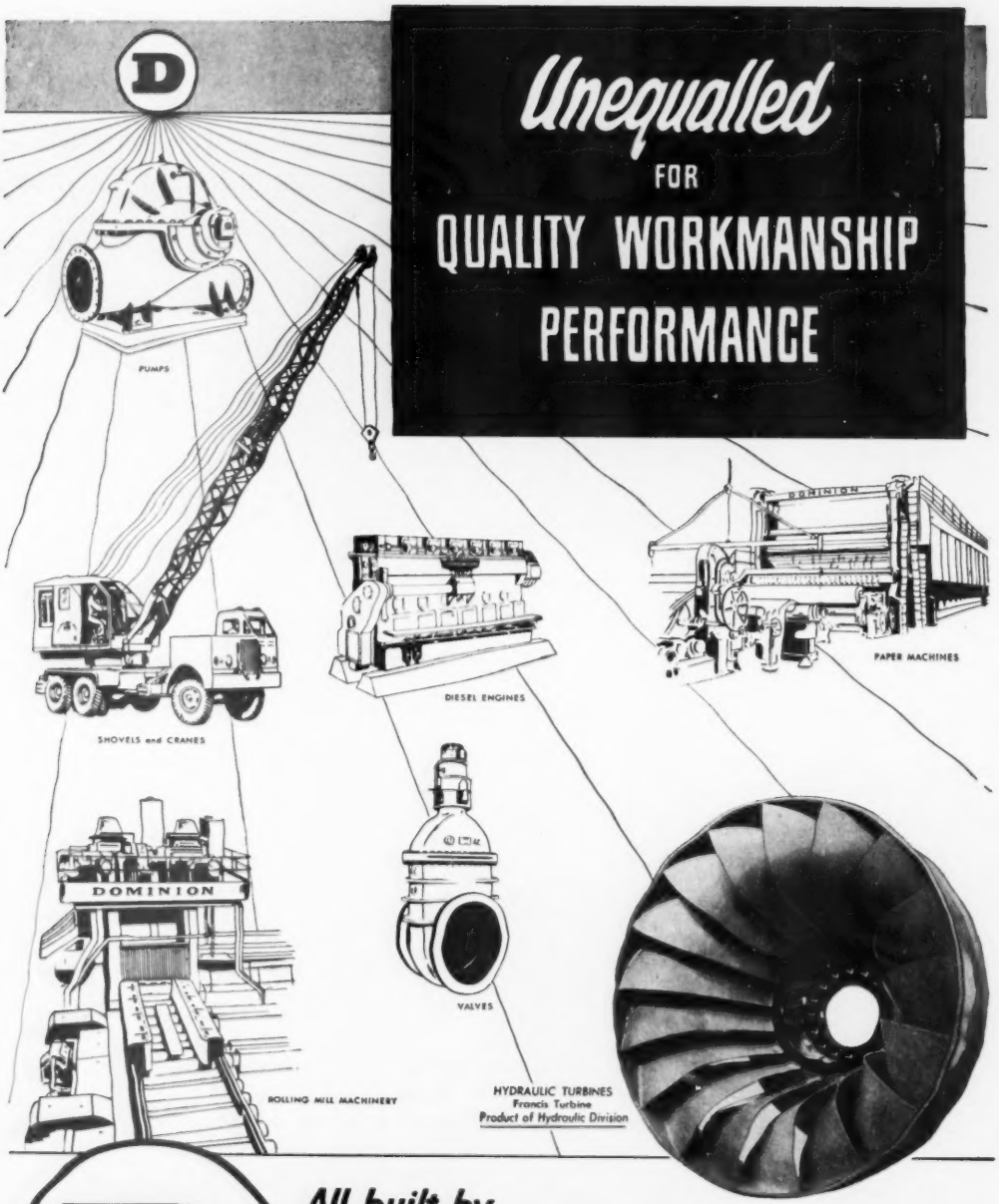
AMERICAN Cyanamid COMPANY

CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT
BOUND BROOK, NEW JERSEY
New York • Chicago • Boston • Philadelphia • Charlotte • Providence

Unequalled

FOR

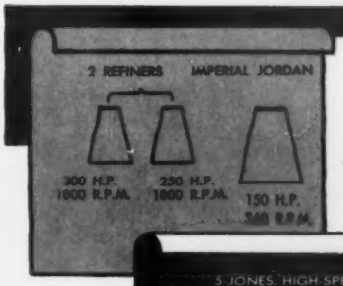
QUALITY WORKMANSHIP PERFORMANCE



All built by

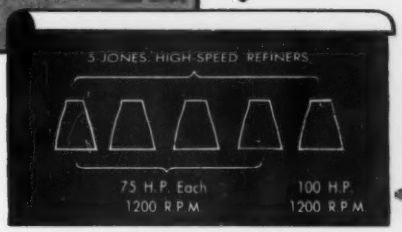
DOMINION ENGINEERING COMPANY LIMITED

MONTREAL • TORONTO • WINNIPEG • VANCOUVER

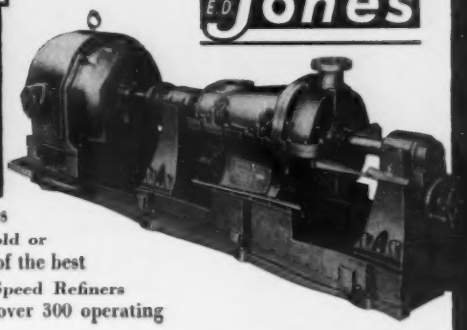


Better Control
More flexibility
better preparation

OLD INSTALLATION
NEW INSTALLATION



E.D. Jones



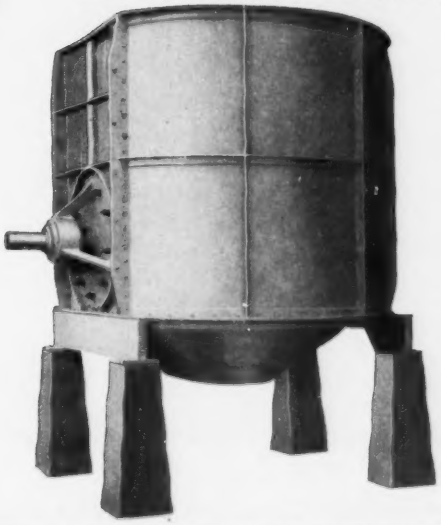
The refining equipment replaced (in this actual Jones installation) by Jones High-Speed Refiners was not old or obsolete or worn-out equipment. It represented some of the best current competitive thinking. . . . Yet Jones High-Speed Refiners actually produced improved stock — at a saving of over 300 operating horsepower. They save on maintenance cost, too.

E. D. Jones & Sons Company, Pittsfield, Mass.

For more information, write for Bulletin EDJ-1011A.

BUILDERS OF QUALITY STOCK PREPARATION MACHINERY

Cut *HOURS* from your beating cycle



The unique 4-way pulping action of the PULP-MASTER provides complete disintegration of new pulp, wastepaper and even wetstrength papers in 10 to 40 minutes.

A New England mill reports: "We operate our Pulp-Master . . . primarily as a stock breaker . . . with stock of high consistency — 5½% to 7%. The Pulp-Master has reduced our beating cycle for all types of stock."

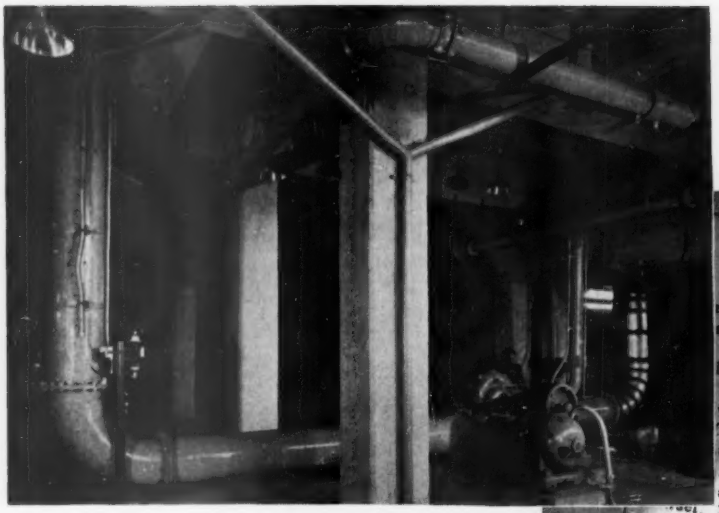
Available in four sizes: for batch or continuous operation. Write for Bulletin EDJ-1019B, or ask your Jones representative.

E.D. Jones

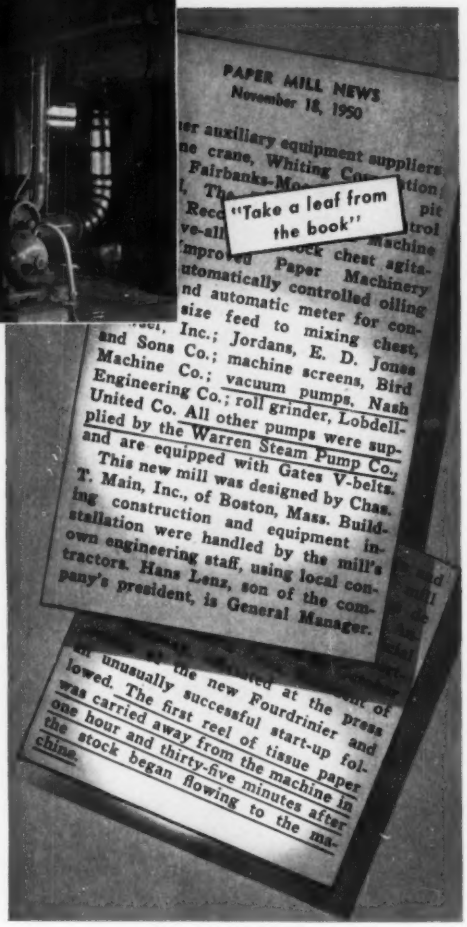
PULP-MASTER

E. D. Jones & Sons Co., Pittsfield, Mass.

BUILDERS OF QUALITY STOCK PREPARATION MACHINERY



Warren Fan Pump with variable speed drive and piping from Couch Pit to Screens, including PH control piping at left.



South of the Border -

San Angel Mill in Mexico Standardizes on WARREN PUMPS

The new paper mill and groundwood mill of Fabricas de Papel Loreto y Pena Pobre, San Angel, D. F., Mexico is now in full production, and is considered one of the most modern and efficient operations of its kind south of the border.

As stated in the news item shown, practically all the pumps in these mills are Warren, and include such items as:

Blow Tank Pump
Black Liquor to Washers
Fan Pump
Bull Screen Pump
White Water Pump
Beater Supply Pump
Hydropulper Pump
Machine Chest Pump
Felt Shower Pump
Seal Box White Water Pump
Clear Water Shower Pump
Circulating Pump for Log Pond
Black Liquor Booster Pump
Weak Liquor to Washers
Rosin Size Pump
Groundwood Supply Pump
Grinder Pressure Pump
Chemical Pulp Refiner Pump
Broke Beater Pump
Sweetening Pump
Dirtec Pump
Fresh Water Supply Pump
Couch Pit Pump
White Water Booster

Other foreign fields in which Warren Paper Mill Pumps are on the job include India, Italy, Finland, Puerto Rico and Portugal.

At home or abroad, it pays to specify:

PP22

WARREN PUMPS

WARREN STEAM PUMP COMPANY, INC., WARREN, MASSACHUSETTS

TREES AND TIRES may appear to have little in common. Actually, more than two-thirds of the tires made in this country today depend upon wood to provide longer life – added safety – and lower cost.

The strong tough cords and fabric around which these superior tires are built are made of viscose rayon yarn produced by chemically converting highly purified cellulose derived from wood.

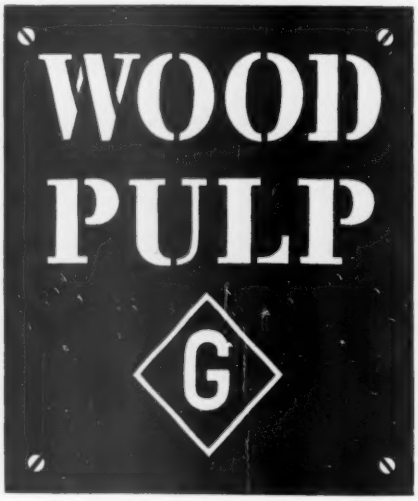
Rayonier supplies the yarn producers with a type of purified wood cellulose specially developed to help assure production of yarns with the high strength and fatigue resistance required by tire manufacturers.

RAYONIER
INCORPORATED

Producers of highly purified wood cellulose for textiles, tire cord, cellophane, plastics

EXECUTIVE OFFICES: *122 East 42nd Street, New York 17, New York*
MILLS: *Hoquiam, Port Angeles, Shelton, Washington; Fernandina, Florida*

Established 1886



"The challenges of today are also the opportunities of today."
CHARLES F. KETTERING

Life is change. In a dynamic world nothing is static.

Inevitably, each new year brings with it new problems; but progress itself is merely problems met and solved.

The Pulp and Paper Industry, which has wrought so well in the past, will continue to strive onward.

☆

GOTTESMAN & COMPANY
— INCORPORATED —
100 PARK AVENUE • NEW YORK 17, N. Y.
EUROPEAN OFFICES: Birger Jarlsgatan 8, Stockholm, Sweden

PULP & PAPER
"The Cellulose Age"
PRODUCTION AND MANAGEMENT JOURNAL OF THE NORTH AMERICAN PULP AND PAPER INDUSTRY

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Publication Office
LOS ANGELES—124 West Fourth St., (13); MU 8194
Executive, Editorial and Advertising Offices
SEATTLE—71 Columbia St. (4); MA 1626
Other Editorial and Advertising Offices
NEW YORK—370 Lexington Ave. (17); MU 3-9294
CHICAGO—5410 Berteau Ave. (41); AV 3-1392
NEW ORLEANS—3518 Dante St. (18); AM 2762
VANCOUVER, B. C.—675 W. Hastings St.; MA 1520
534 SW Third Ave., Portland 4, Ore.; 121 Second St., San Francisco 5.

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The New-Style Annual Reports

Some of the commendable new trends in the annual reports of large corporations, and of pulp and paper companies in particular, are evident in the new report issued by Nekoosa-Edwards Paper Co.

For one thing, it is addressed to stockholders *and employes*. (There were 1827 shareholders and 1740 jobholders at the year's end.) It details the departmental progress of the whole organization. A "pie" chart shows how the sales dollar is cut up for materials, operating payroll, taxes and other lesser items. And there are other attractive and significant illustrations. All in all, it is an excellent report from every standpoint.

Like many others issued this year, it is very graphic and as clear and concise as it is comprehensive. More corporation managements are becoming aware of the fact that their annual reports can do a job for them in the field of employe and public relations.

Union Bag & Paper Corp.'s annual report contained a most interesting section showing in pictures and words what both the company and some of the individual employes (for instance, John Doty, shop foreman, who is a local board of education president; David Knight, paper mill foreman, who is an alderman, etc.) are doing "to make America stronger and more secure." A page depicted how company products carried "benefits of American democracy and industry throughout the world." Certainly, such material has seldom been seen before in a corporation annual report!

Mr. Mead's Views on Labor Unions

We are pleased to report that the article we published last month by Mr. George Wilson Mead, the retired president of Consolidated Water Power & Paper Co., has attracted considerable interest among our management and supervisory readers and we have had several letters about it. It was a frank discussion of his experiences with unions, and his thoughts along the way as he developed practical and beneficial management-labor relations in collaboration with the unions. It apparently still has significance in 1951 for our readers, although it was many years ago that Mr. Mead actually wrote it.

Incidentally, his election as the "Citizen of the Year" by Wisconsin Rapids Chamber of Commerce for many years of unselfish service to the community, is a timely and richly deserved tribute that coincided with our publication of his article.

About Revival of Paper Uses

The constant resurgence of paper products believed to be obsolete is one of the many minor interesting phenomena of the industry. There are few today who recall clearly those old mills, along the streams of New England, making paper collars, whose dryer rolls were often fired from inside. But during the last war the U. S. Navy bought millions of paper collars and officers welcomed them. Another segment of the paper industry having a remarkable revival is comprised of U. S. wallpaper mills. Not long ago we went through a period when plaster and stucco and various paints did things to the wallpaper industry. But today interior decorators, always straining for effects, use wallpaper for decorating rather than mere covering. The printing and ink trades grow wiser, and designers bolder. The technical companies come forth with products which make wallpaper more than just pretty paper. At the recent Home Furnishings Show in New York a shower of spray constantly dashing at a papered wall attracted thousands of housewives and decorators, but it told them also of wet strength resins in the paper to end steam and water damage. As noted by the sharp eyes of Fraser Paper Co.'s "The Voyageur," it also told of chemicals to make wallpaper stainproof, mildewproof, greaseproof, fire resistant, fadeproof, "and to make it easier to clean spots induced by lipstick, dirty fingers, crayons, and grease." It is estimated that 80% of the living rooms in the newer apartment buildings now rising in New York have wallpaper for decorative effects, most of it production-made in the U. S. but vying with the finest hand-made foreign imports.

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PULP & PAPER circulates all over the world. *It is read in virtually every pulp and paper company office and mill throughout the United States, Canada, Mexico, Alaska, Hawaii, the Philippines, Australia and New Zealand. It is read in many other offices and mills in Argentina, Brazil, Chile, Colombia, Cuba, Ecuador, Uruguay, Venezuela, England, Ireland, Scotland, Sweden, Norway, Finland, France, Germany, Austria, Belgium, Holland, Czechoslovakia, Italy, Spain, Switzerland, Soviet Russia, Poland, Jugoslavia, India, Pakistan, Israel, South Africa, China, Japan, both near and far around the world, where pulp and paper are made.*

PULP & PAPER *is a Member of the Audit Bureau of Circulations, 165 W. Wacker Dr., Chicago (1), a cooperative association of advertisers, advertising agencies and publishers for verification of circulation of newspaper and periodical members in the U. S. and Canada. Subscription prices for 13 issues per year (12 monthly issues and also the valuable and comprehensive reference issue entitled the North American Review Number) are as follows: In the United States, Canada, Mexico and other Pan American Union nations—$3 for one year or $5 for two years. In all other countries—$4 for one year and $7 for two years.*

THE SOUTHERN SURGE

OVER 20 NEW MILLS PLANNED

Announcement of plans for immediate doubling of International Paper Co.'s new sulfate process Southern hardwood (gum) dissolving pulp mill at Natchez, Miss., made by President John Hinman in late March has served to bring into sharp focus the current expansion surge in the South.

The Natchez mill was originally projected to include three successively built 300-ton units. The first was completed May 9, 1950. Initially started on pine, the unit gradually shifted toward 100% production from gum.

In the April issue, PULP & PAPER referred to a tissue company's interest in a site at Lockhart or Florala, Ala.

To this add the Prescott, Ark., project of White Star Paper Co. (Dierks and Ozan Lumber Cos.), now reported as off the shelf for re-examination in the light of national defense needs.

The mill project of Choctaw Pulp & Paper Co. near Butler, Ala., is enjoying renewed interest.

Additionally, there is the prospective mill site at Foley, Fla., backed by the extensive timberlands of Brooks-Scanlon, Inc.

The Southern Newspaper Publishers' Association still has a goal of two more newsprint mills in the South. Both Prescott and Butler were originally proposed as newsprint projects.

Reports from Washington list The Mead Corp. as having been granted a $21,480,000 accelerated depreciation permit for a kraft container board unit without identification of the site.

Mechanization Needed

A Southern mill executive has posed the double-barreled question: "Where's the pulpwood coming from and where will the product be sold?" Many large pulpwood and logging operations have moved forward in woodland harvesting mechanization. This brings the wood in, notably when chain saws are brought into use. Experience has shown these aids result in lower stumps, more wood recovered per tree felled. Paper companies have been buying up forest lands whenever price and quality are in line.

Another entirely new factor is that lumber mills are seriously looking into log barking, planning to ship bark free chips to neighboring paper mills.

Projects under way or announced include:

1. The new Riegel Paper Co. mill at Acme, N.C., covered by accelerated tax depreciation permit for $13,807,500. The mill will produce kraft pulp and paper from pine and hardwood.

2. The North Carolina Pulp Co. (Kieckhefer Corp.), Plymouth, N.C., has a permit for $1,051,713 covering new semi-chemical pulping facilities.

3. The Mead Corp.'s Kingsport, Tenn., mill has a permit for $4,258,000 covering a soda process installation. (Developments reported in PULP & PAPER, Feb. 1951 issue.)

4. Ecusta Paper Co. (Olin Industries, Inc.), Pisgah Forest, N.C., will complete its new cellulose plant in May; hit full production in September.

5. West Virginia Pulp & Paper Co. is upping the paper production at its Charleston, S.C., mill.

6. At Savannah, Ga., Union Bag & Paper Corp. will provide a semi-chemical process to utilize hardwoods, converting No. 2 machine to produce corrugating material for shipping containers and add a sixth machine to maintain pine product production. The tax permit is for $18,000,000. Increased production will be 400 tons daily.

7. Expansion of St. Joe Paper Co., Port St. Joe, Fla., has been provided in a certificate for $24,010,958 new construction. Plans have been withheld pending conclusion of details. In recent years this company has moved toward integration by building converting plants at Port St. Joe and Houston, Texas.

8. Brunswick Pulp & Paper Co., Brunswick, Ga., will attain a bleached pulp production of 400 tons through its current $5,000,000 expansion program set for completion Aug. 1 (an increase from 300 tons).

9. National Container Corp. has an improvement program for its mill at Jacksonville, Fla.

10. Foundations for the St. Regis Paper Co. 300-ton per day expansion at Pensacola, Fla., are well underway.

11. Plans for St. Regis' 225,000 ton annual production mill at Jacksonville are being expedited.

12. Doubling of the Palatka, Fla., mill of Hudson Pulp & Paper Co., originally completed in 1948, will provide an additional 200 tons daily. The project is well advanced.

13. Work is underway for expansion of Armstrong Cork Co.'s Pensacola, Fla., wallboard plant. Additional use of pulpwood is provided by installation of a standard barker.

14. Hollingsworth & Whitney enlargement at Mobile, Ala., has been granted a permit for $13,800,000. This project is well along.

15. At Moss Point, Miss., International is replacing an old mill with a new one that will step up production from 260 to around 500 tons per day.

16. Kimberly-Clark Corp. is installing a third crepe wadding machine at its Memphis, Tenn., plant to begin operating July, 1951, and a fourth machine, already scheduled, will double the original mill capacity.

17. Brown Paper Mill Co., West Monroe, La., has sold $10,000,000 in 3½% promisory notes to Prudential Insurance to cover improvements. The mill is installing an additional paper machine.

18. At Pasadena, Texas, Champion Paper & Fibre Co. has maintained an improvement and expansion program since the conclusion of World War II.

19 and 20. Two mills for production of wallboard material are going in on the former Oklahoma Ordnance Works location, near Pryor, Okla., both served by power from Oklahoma's Grand River Dam Authority. National Gypsum is building a $4,000,000 project on a 40-acre site, production to be 150 tons per day. Nearby, the Coronado Paper Co., of Chicago (identified with Certain-Teed Products Co.) is building a $5,000,000 plant on a 30-acre site, production 150 tons per day.

CERTIFIED SINCE JAN. 25

Of the 231 companies which received certificates of necessity from the NPA to encourage new expanded production facilities between Jan. 25-Mar. 7, (permitting tax write-offs) the following were in this industry (official list):

Company	Location	Purpose	Amount
St. Joe Paper Co.	Port St. Joe, Fla.	Kraft containerboard	$24,010,958
International Paper Co.	Natchez, Miss.	Bleached dissolving kraft pulp	22,034,300
(for first unit being built when NPA was created—now operating)			
International Paper Co.	Natchez, Miss.	Bleached kraft pulp	20,937,658
American Box Board Co.	Filer City, Mich.	Wood pulp	7,694,446
Thilmany Pulp & Paper Co.	Kaukauna, Wis.	Kraft paper	2,962,000
Lee Paper Co.	Vicksburg, Miss.	Fine papers, bond, maps, etc.	1,000,745
Weyerhaeuser Timber Co.	Everett, Wash.	Kraft bleached pulp	19,125,000
Weyerhaeuser Timber Co.	Longview, Wash.	Kraft pulp, containerboard	12,469,377
Rayonier, Inc.	New York	Cellulose	1,507,980
Rayonier, Inc.	New York	Cellulose	412,418
Rayonier, Inc.	New York	Cellulose	873,610
Green Bay Paper & Pulp Co.	Green Bay, Wis.	Semichemical pulp and corrugating	197,116

ED WOOD MANAGER

Edward P. Wood has been promoted to manager of H & W Co., Mobile, Ala., succeeding Dennis E. Cousins, recently promoted to vice president. Mr. Wood had been assistant manager since 1944. Prior to that he was technical director for Weyerhaeuser at Longview, Wash.

I. P. CO. STILL GROWS

Natchez To Double; Other Mills Expand

International Paper Co., which set a world record for any single concern by making over 3½ million tons of paper, paperboard and market pulp in 1950, is going to double the capacity of its new Natchez, Miss., pulp mill (completed only last May 12, 1950), raising its output to 600 tons daily (about 210,000 tons annually). Announcement is made by John Hinman (shown in picture), president of the company. Other increases under way:

1. Work is being pushed on the new 300-ton-a-day bleached kraft board and paper mill unit at Moss Point, Miss., and rebuilt power and recovery plants there.

2. Machine changes and additions to bleach plants at the Louisiana (Bastrop, La.) and Mobile, Ala., mills will permit production of either bleached or unbleached kraft on one additional machine at each mill.

3. New milk container plants are under construction at Atlanta, Ga., and Kansas City, Kan., capacity of I.P.'s shipping container plant at Wooster, O., is being increased; and milk container operations at Kalamazoo were moved in February into a new plant from leased quarters.

Increases in 1950

Annual productive capacity of all I.P. mills in paper, board and market pulp was increased by 292,425 tons during 1950. Natchez, of course, represented the largest single increase. Next largest were in kraft paper and Chemfibre capacities at Panama City, Fla., Georgetown, S.C., and Bastrop Mill, Bastrop, La.

Increased newsprint capacity at the Canadian I.P. (Gatineau and Three Rivers) and New Brunswick I.P. (Dalhousie) mills totaled 21,321 tons in 1950. Jute board mills in Three Rivers, Mich., and Cincinnati were sold, but one at Hartford City, Ind., was reopened.

Net expenditures on mills properties and woods equipment in 1950 totaled $32,455,181, after deducting sales and write-offs, but before $15,459,038 depreciation.

Plans for Natchez

Mr. Hinman, president, said a certificate of necessity has been obtained for doubling the Natchez plant by fall of 1952, raising the payroll there to 1600 and $6,000,000 annually.

He said "solution of many of the difficult problems that faced us a year in producing dissolving pulp from hardwoods by the new sulfate process are now being worked out by the engineers and production men of our Southern Kraft Division and production is now on an improved basis."

A press release said additions planned at Natchez "will be a duplication of the present plant." A complete description of the Natchez plant, including its two hydraulic barkers, eight carbon steel lined 5460 cu. ft. digesters (largest for kraft in world) multi-stage bleach plant, 220-inch Beloit Fourdrinier pulp dryer, two Babcock & Wilcox recovery boilers, also bark-burning and gas-fired power boilers, and two General Electric turbo-generators, etc., is published in PULP & PAPER Nov. 1950 issue, page 66. Of course, it should not be assumed at this stage that the company announcement means an exact duplication of the present plant.

Records Set in 1950

The accompanying tables show tonnage figures on the production of all I.P. mills (in 1950 there were nine basic kraft pulp and paper mills in the South; three newsprint and dissolving pulp mills in Canada, six fine and specialty paper mills in northeast U.S., plus converting and allied operations).

During 1950 sales of International Paper Co. and subsidiaries were at a record

I. P. MILLS AND PLANTS—PRODUCTION IN TONS

UNITED STATES	*1940*	1950	*1949*
Kraft container board (unbleached)	673,019	1,393,431	1,150,429
Kraft wrapping, bag and specialty papers (unbleached)	256,698	379,930	274,051
Bleached kraft paper and board	109,420	307,334	277,143
Kraft pulp for sale	108,742	72,048	155
Total kraft board, paper and pulp	1,147,879	2,152,743	1,701,778
Groundwood specialty papers	187,076	185,072	173,936
Book and bond papers	117,393	141,733	113,142
Other pulp and paper grades	55,204	26,763	22,303
Total United States	1,507,552	2,506,311	2,011,159
CANADA			
Newsprint	540,851	774,484	759,244
Dissolving and other sulphite pulps	215,444	238,620	183,593
Other pulp and paper grades	11,154	5,470	5,424
Total Canada	767,449	1,018,574	948,261
TOTAL TONNAGE	2,275,001	3,524,885	2,959,420

Pulp figures include shipments to mills of the companies for their own use as follows: 53,961 tons in 1940; 37,384 tons in 1950 and 16,397 tons in 1949.

	1940	1950	*1949*
Shipping containers	8,081*	251,042	219,499
Grocery, multi-wall and miscellaneous bags	69,875	155,543	132,071
Insulating board – Canada	18,693	36,961	33,171
Plywood – Canada	—	13,313	9,621
Milk containers and miscellaneous converted paper products	30,119†	100,784	77,253
TOTAL TONNAGE	126,768	557,643	471,615

* Container plants acquired December 1, 1940; represents one month's production only.
† Includes no production of milk containers; business acquired as of April 1, 1946.

level, reaching a total of $498,415,714, according to its annual report.

Tonnage output of paper, board and pulp for sale totaled 3,524,885 tons, as compared with the 1949 total of 2,959,420 tons, a world record for any single company.

Net profits totaled $66,647,151, or $7.38 per common share, which compares with $51,646,739 in 1949 ($5.70 per common share).

New Orleans Safety Meeting Draws 60

Approximately 60 persons participated in the annual meeting in New Orleans on April 2-4 of the Southern Pulp & Paper Safety Association. Featured was an all day trip to Bogalusa, La., where delegates toured the mill and woodlands of Gaylord Container Corp.

Those participating included: I.A. Magnitzky, of Gaylord Container; Frank J. Crandall, Liberty Mutual Ins. Co.; J. W. Meinhardt, Gaylord; R. W. Gray, Union Bag & Paper Corp.; Gene Miller, National Safety Council; Paul Krueger, Gaylord; R. E. Brady, Standard Oil; C.L.R. Doughtery, Union Bag; D. J. Erett, National Container Corp.; M. L. Hodges, West Virginia Pulp & Paper; George H. Smith, International Paper Co.; Dallas Henry, Southern Advance Bag & Paper Co.; C.C. Coughlin, Gulf States Paper Corp.; and C. C. MacPike, St. Regis Paper Co. Co-chairmen for the meeting were O. J. Sherman and V. F. Underwood, both of Gaylord.

The 1952 meeting will be held in Panama City, Fla., with International Paper as host. J. F. Posten, mill safety director, will serve as chairman, with J. W. Lowrey, mill manager, as co-chairman. C. C. MacPike, St. Regis, Pensacola, Fla., was elected secretary-treasurer. Others named directors: Robert W. Gray, Union Bag; N. S. Porter, St. Joe Paper Co.; J. E. Brett, Hudson Pulp & Paper Co.; George R. Golden, Rayonier, Inc.; and W. E. Johns, Coosa River Newsprint Co.

Brompton to Expand

Financial position of Brompton Pulp & Paper Co. has improved to such an extent that extensive expansion of its mills in Quebec and Ontario is contemplated, according to N. A. Timmins, Jr., president.

I. P. (IKE) EAST, Mill Manager at Natchez, where pulp output will be doubled. E. E. Ellis Jr. is Production Supt., and J. T. Peninger, Mill Agent.

Ross Western Mgr. Discusses Exhaust System

A. E. Montgomery, vice president, J. O. Ross Engineering Corp. western manager, Chicago, was guest speaker at the Mar. 22 meeting of the Miami Valley Superintendents. Mr. Montgomery's address was on hood and hood exhaust systems. He commented that modern hood design is characterized by provision of generous overhang, and of ample space sufficiently high above the machine to allow the hottest and most moisture-laden air to stratify for exhausting mechanically at a constant but controllable volume.

Crossett Makes Fast Recovery from Sky Bolt

Production of paper at Crossett Paper Mill, Crossett, Ark., was resumed April 1, after several days' suspension due to lightning striking the plant. The lightning struck the powerhouse, shorting the main cables from the generator, resulting in damage to switching gear and generating equipment estimated roughly at $100,000. Immediate effect was to shut down the plant completely. In starting up, the mill utilized in part power from two generators not damaged and from the Arkansas Power & Light Co. The third, and damaged generator must be rewound before returning to service.

K. O. Elderkin, mill manager, said he "wished to acknowledge help and cooperation of the highest order extended by Westinghouse Electric Corp., the Arkansas Power & Light Co., government agencies, and customers and suppliers who rallied to the support of the mill in many ways, making it possible to get back into operation much sooner than originally anticipated."

TAPPI'S KEY POLICY

Kenneth P. Geohegan (shown in picture), who after long service in TAPPI as executive committeeman and in other committee responsibilities, has been elevated this year to its presidency, was asked by PULP & PAPER regarding his plans for that branch of the industry organization.

While pointing out that his executive committee had not yet met, and that it would have to discuss and approve any specific new activity, Mr. Geohegan did emphasize that his administration intends to set up machinery for aiding and advising various TAPPI committees.

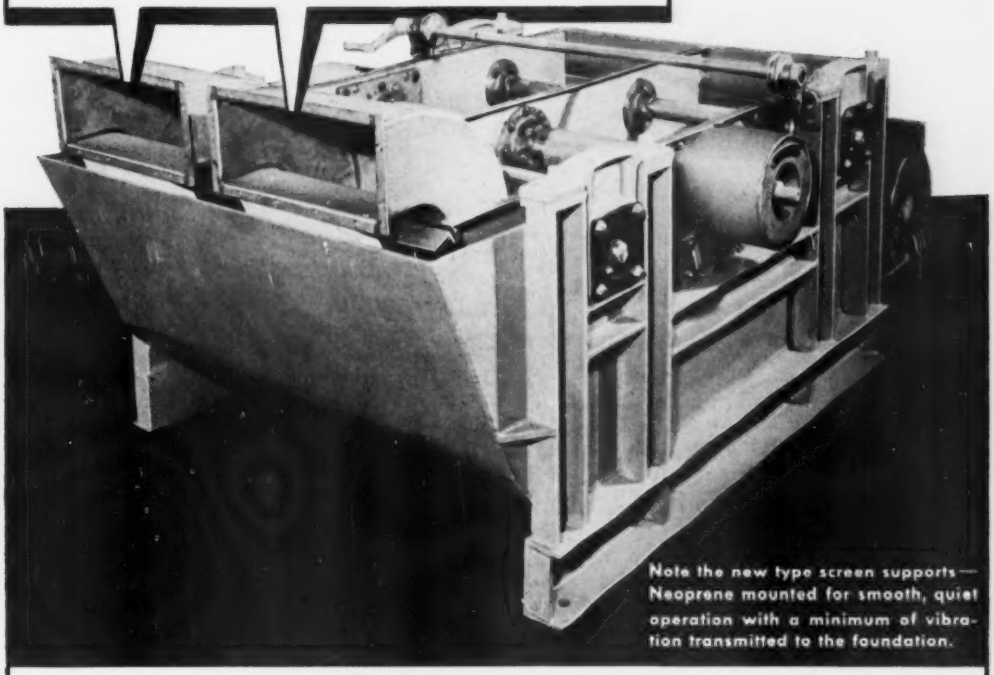
"Obviously, TAPPI's chief objective is to serve the entire paper industry by helping solve its problems," he said. "One of the functions of the national organization is to aid the various committees in their efforts to attain this objective. The keynote of the progress that we hope to make during the coming year lies along this line. Not only do we hope to be able to set up machinery to give advice and material aid to the committees, but in so doing we hope to unify their work into a planned program to prevent overlapping of effort and so that the work of each committee, so far as possible, will support that of the others."

To readers of PULP & PAPER, he stressed the point: "We feel that such a program benefits not only our members but also the management and supervisory officials, and the entire industry."

Mr. Geohegan is vice president of Howard Paper Mills Inc.

STOCK PREPARATION—than which there is probably no other subject in the industry which will stir up more friendly disputes and lively discussion—was the subject of the *evening at the Superintendents divisional meeting in Kalamazoo on March 15. This was the board of experts:* 1—**MERLE WILKINS**, *Kalamazoo Paper Co., Moderator;* 2—**H. A. BONNINGEN**, of Vicksburg, Mich., now Midwest rep. of Noble & Wood; 3—**TANY AGRONIN**, Shartle Brothers Chief Engineer; 4—**RAY BENNETT**, of Appleton, Valley Iron Works; 5—**RICHARD W. POLLEYS**, for Downingtown Mfg. Co.; 6—**ARTHUR GRIFFITH**, for Hermann Mfg. Co.; 7—**CHARLES H. VICKERY**, E. D. Jones & Sons Vice Pres.; 8—*RICHARD AHRENS, of Appleton, for IMPCO;* 9—**R. BURKE MORDEN**, *Morden Machines Vice Pres. Another expert participating was President* **ROGER J. SHOUVLIN** *of Bauer Bros., but he 'escaped' the Superintendents' cameraman.*

AN ENORMOUS APPETITE FOR HIGH CONSISTENCY PULP



Note the new type screen supports—Neoprene mounted for smooth, quiet operation with a minimum of vibration transmitted to the foundation.

The BIRD JONSSON SCREEN combines intense but precisely controlled vibration with specially shaped screen plates to handle up to 1½% consistency sulphite — 80 to 100 tons of it per day; or 2½% groundwood and sulphate — 150 tons or more.

For fine screening, using slotted plates, Jonsson Screens have extraordinary capacity, too. For example, with .010″ cut screen slots, 0.8 to 1% consistency stock is readily handled, producing 10 to 11 tons per Screen per day.

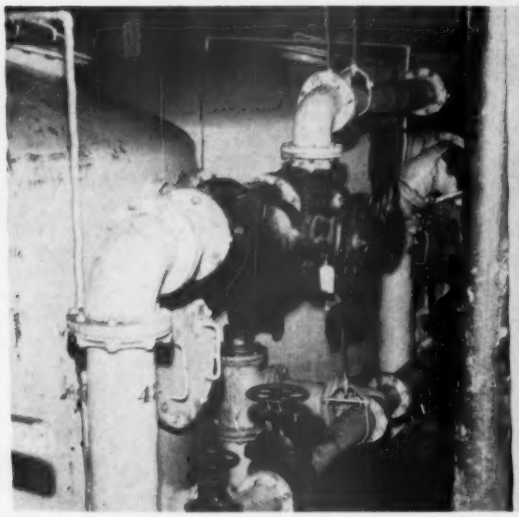
Why not find out what Jonsson Screens can do for you?

BIRD MACHINE COMPANY

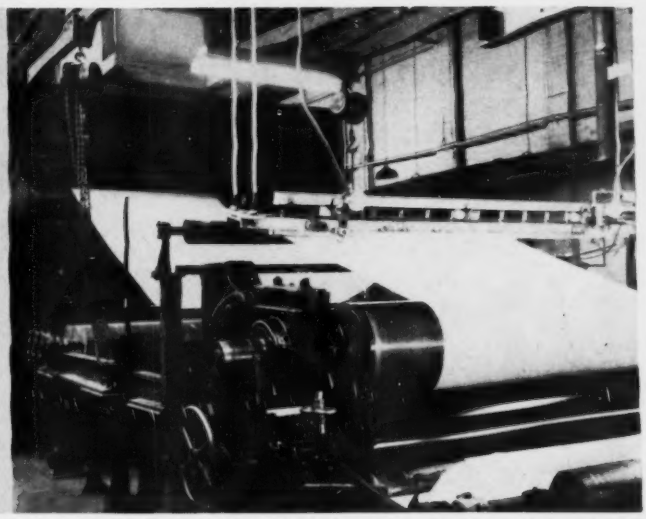
SOUTH WALPOLE • MASSACHUSETTS

Am. Writing Paper Corp.

CONSOLIDATES--MODERNIZES



SECTION OF NEW IMPCO Swedish-type WACO FILTER PLANT installed at Eagle-A Linden Mill Division of American Writing, providing cleaner and purer water—result, cleaner and brighter paper.



CHARACTER OF COCKLE maintained at all times by this new Air Dryer installation at the Eagle-A Albion Mill of American Writing Paper Corp. in Holyoke, Mass.

When officials of American Writing Paper Corporation, at the beginning of 1951, announced completion of a "more than a million dollar rehabilitation program," they meant "more" in terms of money.

But plainly, the program of this Holyoke company had another plus value, for it took more than an excess of a million dollar expenditure to consolidate operations, to close unprofitable mills and sell unused properties and make significant changes in the American line of papers. It took very determined courage and very considerable management foresight, for this program began ten years ago when many New England paper mill operations faced the same problem and unfortunately, did not meet it as squarely. Since then more than one out-dated operation in the Northeast (as well as elsewhere) has been sold or shut down, while A.W.P. enters the New Year humming along in six mills housing nine paper machines, with every indication it is on a sound, competitive basis.

This is a story which PULP & PAPER has been after for six years. In 1945, when Edward C. Reid, vice president in charge of manufacturing, was approached for the story, he said, "It's still mostly a plan. We've come along, but it will be several years before the program is complete." Several interim inquiries brought the same response, but late in 1950, on a routine visit into Massachusetts, a staff member was told the time had come for the story.

It was 13 years ago that the present ownership began its study of what to do. After three years of operation, it broke the problem into two main parts: Consolidation of operations and elimination of useless properties; modernization of what was left. They made a plan, figured costs that must be taken out of operating profits, calculated the time element would be ten years. Only a few months ago, it sold the Riverside mill on Holyoke's Cabot Street to the National Blank Book Co. Prior to that, it had disposed of the Beebe-Holbrook and Wauregan divisions, on Dwight Street, and the Parsons division to the Holyoke Water Power Co. These mills have been closed for some time because among the initial moves was concentration of operations within six of the best buildings owned by American Writing Paper on Holyoke's famous pulp and paper canals. During the last few years in Holyoke, a visitor was apt to hear that it was planned to close the old Linden Division, a move that would concentrate all American operations in the row of mills around the horn on Holyoke's third level canal. But, this is not to be the case for the Linden Division, with its two rag paper machines, it is an important cog in the renovated Eagle-A picture and much of the new equipment has been installed there.

In fact, at Linden are the following improvements: New modern (Impco) Waco filter plant; completely rebuilt steam plant converted from coal to oil-firing units; new Cameron winders on machines; Bird screens; Sveen-Pederson savealls; Emerson jordans; completely rebuilt air dryer; a new Bertram beater installation in process.

Breaking down the million dollar expenditure further, improvements are noted also in the following American mills:

Nonotuck Division—New Hydrapulper; Emerson jordans; additional machine dryers; new save-alls; Cameron winders and rewinders; Langston layboy; J. O. Ross Engineering hoods; Grewin air system on machines; improvement in production attained by installation of new dryers.

Mt. Tom Division—Improved type of roll pasting machiner.

Crocker Division—Complete rebuilding of No. 2 machine for lightweight papers such as onion skin, manifold and others; extra Bird screen capacity to other machines; new E. D. Jones jordans; Cameron winders on machines; No. 4 machine rebuilt for increased production as well as the manufacture of high grade rag content papers.

Gill Division—New wet end for the cylinder machine; J. O. Ross Engineering Corp. absorption system; Hydrapulper and Nichols Engineering vortraps.

Albion Division—Overlapping layboy cutters; Seybold trimmers and a rebuilt air dryer.

This demonstrates that not one of the six mills in which American Writing Paper's operations are now concentrated were overlooked in the modernization. The central power plant also came in for rebuilding and the installation of oil-firing equipment for servicing all but the Lin-

Pressure for Production

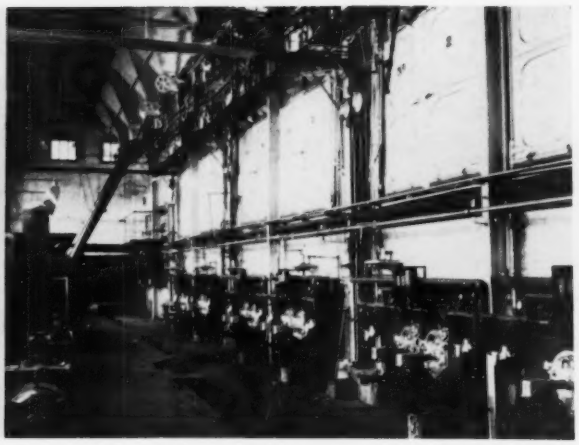
The Beloit Suction Pressure Roll on Yankee Tissue machines pays for itself in increased production. In addition to doing the work of a plain roll, it acts like a suction press in removing excess water quickly and evenly. Blowing is eliminated; the top felt runs cleaner, lasts longer. Beloit engineering background helps you to meet that "pressure for production." —*Beloit Iron Works, Beloit, Wisconsin.*

WHEN YOU BUY BELOIT...YOU BUY MORE THAN A MACHINE!

BELOIT

PAPER MACHINERY

INDIVIDUAL CONTROLS provided for these Sandy Hill flat screens screen installation at the Eagle-A Gill Division mill of American Writing Paper at Holyoke assures uniformity of machine stock.



EAGLE-A Mills Steam Plant of AMERICAN WRITING PAPER CORP. as shown here, has been completely rehabilitated as well as converted from coal to oil by Perfection Grate & Stoker Co., Springfield, Mass.

den mill which, as noted above, has its own power unit.

Emphasis on Quality

The corporation also recognizes as important, the quality control of the Eagle-A grades, hence has initiated other improvements that make possible increased supervision of that control. Laboratories are on a 24-hour basis, trained personnel has been gradually increased as has the chemical staff for research in new processes and testing of application of new chemicals.

The emphasis on quality and in a sense its control was indeed the basis for many of the fine points of the mill improvements. For example, in the rebuilding of No. 2 machine which brought the American paper machine total to nine in the new plan, (and gave Crocker its third machine) a refinement like the Mt. Hope free-wheeling expander was decided on as a must because of this attachment's success in eliminating wrinkles, improving paper quality and aiding in increased production on any weights. This machine, which had been down for many years, was brought to modern life to specialize on lightweight grades such as onion skins, manifold and other special types of thin papers.

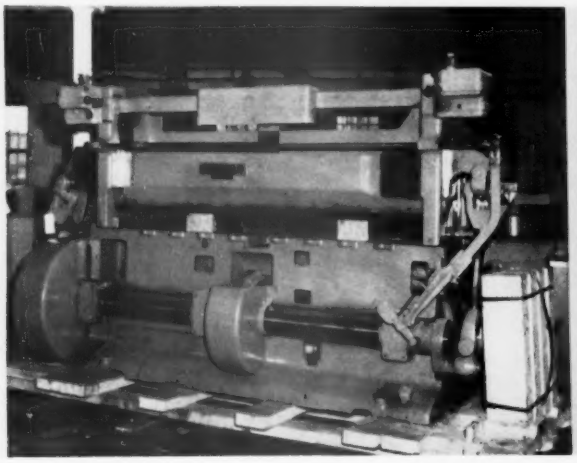
Over this same period, the corporation has been busy on simplification of grades, concentrating on fewer of them—choosing the ones on which it can maintain quality with heavy production and on which, of course, it can expect steady sales. By grouping a fewer number of grades into "families"—and such as America's well known Eagle-A Trojan Bond—it achieves better production and quality in the mill at wider profit and also it improves relationships with customers and strengthens its advertising program by simplification. It has gone heavily and successfully into a boxed typewriter paper line and widely extended markets on other flat papers.

Not the least of the results of the rehabilitation has been stabilization of employment at these pioneer mills along the historic canals of the nationally known papermaking city.

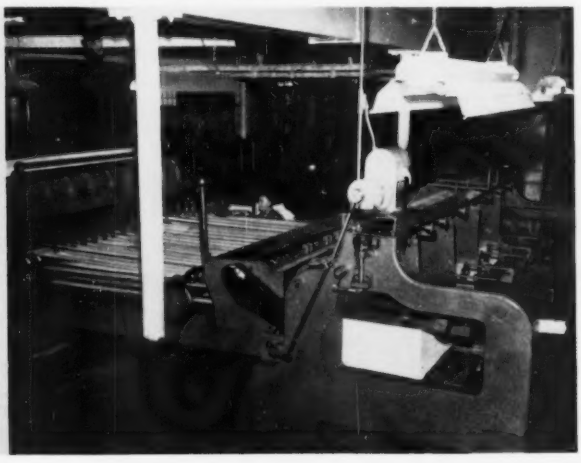
As would be expected in a program of concentration and simplification, the sales and advertising headquarters remain in Holyoke, with branches at Boston, New York, Chicago and San Francisco. The management today comprises the same far-sighted optimists who took over American Writing 13 years ago: Thomas H. Blodgett, chairman; Peter Freedman, vice president and comptroller; Edward C. Reid, vice president in charge of manufacturing; John G. McNaught, vice president in charge of sales and advertising; Charles L. Kirkpatrick, secretary-treasurer; and assistant treasurers George A. Tyler, Richard Strawbridge and Ray M. Twining.

American Writing Paper Corp.'s mill superintendents are: Edward T. McQuillan; Patrick McGinty, Edward J. McCarthy, Frank E. Caton, Ronald C. Malloch.

NEW 84 INCH SEYBOLD TRIMMER KNIFE on its way into position—one of several that are replacing old equipment at Eagle-A Albion Finishing Plant.



VARYING COLOR Shades within a ream of paper are eliminated by this high speed overlapping cutter installed on No. 1 Machine in the Eagle-A Nonotuck Mill of American Writing Paper Corp.

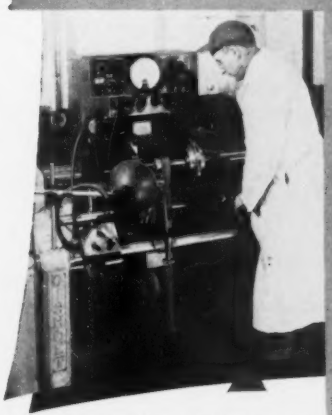


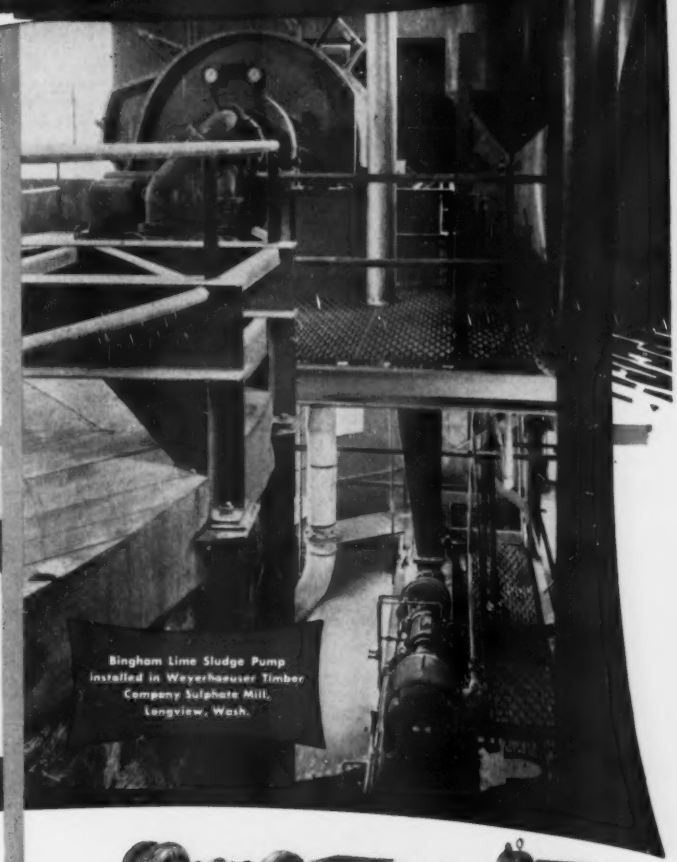
Bingham

PRECISION BUILT FIELD PROVEN PUMPS

Lime Sludge Pumps

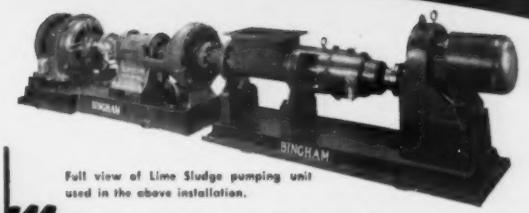
Bingham Lime Sludge Pumps deliver sludge with high percentage of solids directly from Mud Filter to Kiln. With this special equipment, Filter and Kiln may be installed at locations utilizing available mill space regardless of their relative elevations. The handling of lime sludge by pumping eliminates the excessive maintenance incident to the use of mechanical conveyors for this service.





Bingham Lime Sludge Pump installed in Weyerhaeuser Timber Company Sulphate Mill, Longview, Wash.

An important factor in Bingham precision built pumps is the static and dynamic balancing of all impellers and rotating parts by means of Gisholt Dynetric balancing equipment shown above. This is typical of the precision machinery in our new and modern plant.



Full view of Lime Sludge pumping unit used in the above installation.

DOUBLE VOLUTE RADIAL BALANCE

Bingham PUMPS SINCE 1921

GENERAL OFFICES:
705 S.E. Main Street
Portland, Oregon

FACTORIES:
Portland, Oregon
Vancouver, Canada

Sales and Service Offices: BOSTON, MASS., 113 Broad Street • CHICAGO, ILL., 275 Old Colony Bldg., 407 South Dearborn Street • HOUSTON, TEX., 1206 Union National Bank Bldg. • MIDDLETON, OHIO, 505 Federal Savings & Loan Bldg. • NEW YORK CITY, N. Y., 611 Graybar Bldg., 420 Lexington Ave. • PITTSBURGH, PENN., 102 Mt. Lebanon Blvd. • SAN FRANCISCO, CALIF., 420 Market St. • SEATTLE, WASH., 316 Joseph Vance Bldg., 1402 Third Ave. • ST. LOUIS, MO., 2533 Salem • ST. PAUL, MINN., 205 South Robert St. • TULSA, OKLA., 200-206 N. Denver St. • VANCOUVER, CANADA, 3550 E. Broadway.

MARATHON BUYS N.Y. MILL

Establishing the first production unit in the East for the far-flung Marathon Corp., that company has purchased the Oswego, N.Y., kraft paper mill of St. Regis Paper Co. (listed 170 tons capacity with one 168 in. Fourdrinier).

Joint announcement was made by the heads of the two companies, William L. Keady for Marathon and Roy K. Ferguson for St. Regis. Marathon also bought the St. Regis bag plant and machine shop properties at Oswego, but their equipment is not included.

Marathon Paper Mills of Canada, at Marathon, on Lake Ontario, can economically ship kraft pulp to Oswego, it was pointed out. The company plans to convert Oswego to manufacture of protective food packaging papers. Marathon now has four Wisconsin and one Michigan mills and plants, a new converting plant at Sunnyside, Wash., besides the pulp mill and substantial timber in Canada.

St. Regis will continue to get a major part of Oswego's kraft paper for several months. St. Regis expects a start up around the first of next year of its new kraft paper facilities under construction in Florida. St. Regis plans to remove its bag manufacturing operations from Oswego.

DON C. RAWSON, appointed to be Resident Mgr. of the Oswego, N.Y., purchased by Marathon Corp. He has been Marathon's Res. Mgr. at Menominee, Mich.

Delivery of the machine shop building to Marathon will not take place until July 1, 1953. Meanwhile St. Regis will continue operations there.

Don C. Rawson will be manager of Oswego operations for Marathon. Mr. Rawson has been manager for Marathon's plant at Menominee, Mich., for 4½ years. He has been with Marathon since 1933.

St. Regis has under way construction of two kraft paper machines and pulp manufacturing facilities in Florida. The new capacity is to replace multiwall bag paper now produced in the company's northern New York mills from pulp largely imported from the Scandinavian countries and Canada.

JAYME ILL; CANCELS TRIP

Dr. George Jayme of Darmstadt, Germany, (shown in picture), who is sometimes called this industry's outstanding authority on wood technology, and who is unquestionably one of the world's top wood chemistry and pulp and paper scientists has been forced by illness to abandon plans for visiting the United States this summer and fall.

It has been tentatively planned for him to address, and lecture before, pulp and paper technical and student groups in such centers as New York, Appleton, Wis., Seattle and Portland, Ore., but he has now been forced to abandon the trip for 1951 at least. He is ill with phlebitis.

In a letter addressed to PULP & PAPER magazine as late as Feb. 28, he had written: "I am looking forward to meeting many friends in the U. S. pulp and paper industry . . ."

At some of the meetings it is now hoped that Dr. Borge Steenborg, one of the directors of the Forest Products Research Laboratory of Stockholm, and an authority on fibers, inter-action of fibers and paper testing techniques, will be the attraction. Dr. Steenborg is coming to New York for the American Chemical Society and International Congress of Pure and Applied Chemistry meetings. The Institute at Appleton, the Pacific Coast TAPPI section which has sponsored annual seminars by international authorities, and other industry groups, had hoped to schedule Dr. Jayme.

Dr. Jayme has been director of the Institute of Cellulose Chemistry at the Technical University of Darmstadt since 1936. He had been at Darmstadt since 1922, except for 10 years—1926-36—which he spent at Hawkesbury, Ont., developing new rayon pulps for International Paper Co. He has lectured from Stockholm to Sidney, Australia, and written 180 scientific publications.

Dr. Parrett and Dr. Jayme To Discuss 1952 Trip

Pacific Coast TAPPI hopes that Dr. George Jayme of Darmstadt University, Darmstadt, Germany, will be fully recovered from present illness and able to come to America in 1952 to lecture before mill groups in Seattle and Portland, Ore.

Dr. Arthur Parrett, research director, Rayonier Incorporated, Shelton, Wash., was expected to discuss the matter with Dr. Jayme while on a trip in Germany. According to Dr. Jayme, Dr. Parrett was to visit him in Darmstadt in April.

Kokoku Official Visits

Yukio Arisawa, director and chief of the technical research section of the Kokoku Rayon & Pulp Co., Ltd., of Tokyo, Japan, is spending several months in the United States and Canada. He has been accompanied on part of his tour by officials of C. T. Takahashi & Co., exporters and importers, of Seattle.

Speaker for Easton Supts. Convention

James Q. du Pont (shown in picture), a great-grandson of the founder of the Du Pont Co., Wilmington, Del., is featured speaker for Pennsylvania-New Jersey-Delaware Division, Superintendents Association convention May 11-12, at Hotel Easton, Easton, Pa. The subject of Mr. du Pont's address will be "Pioneers, Then and Now."

Much must be done—and done quickly. Mr. du Pont said, in explaining his theme, if men and women everywhere are to have their God-given rights and responsibilities as individuals.

The address is scheduled as an after-luncheon feature on Saturday afternoon (May 12). This meeting is being timed so that the women can attend without interfering with any of their own program; in fact, a special invitation is extended to them to remain after the luncheon for Mr. du Pont's talk.

Mr. du Pont, who is manager of the Atlantic District, Extension Div., Du Pont Co., graduated in 1926 in electrical engineering from M.I.T. Associated with Du Pont Co. since 1940, he has been in Wilmington, since 1946.

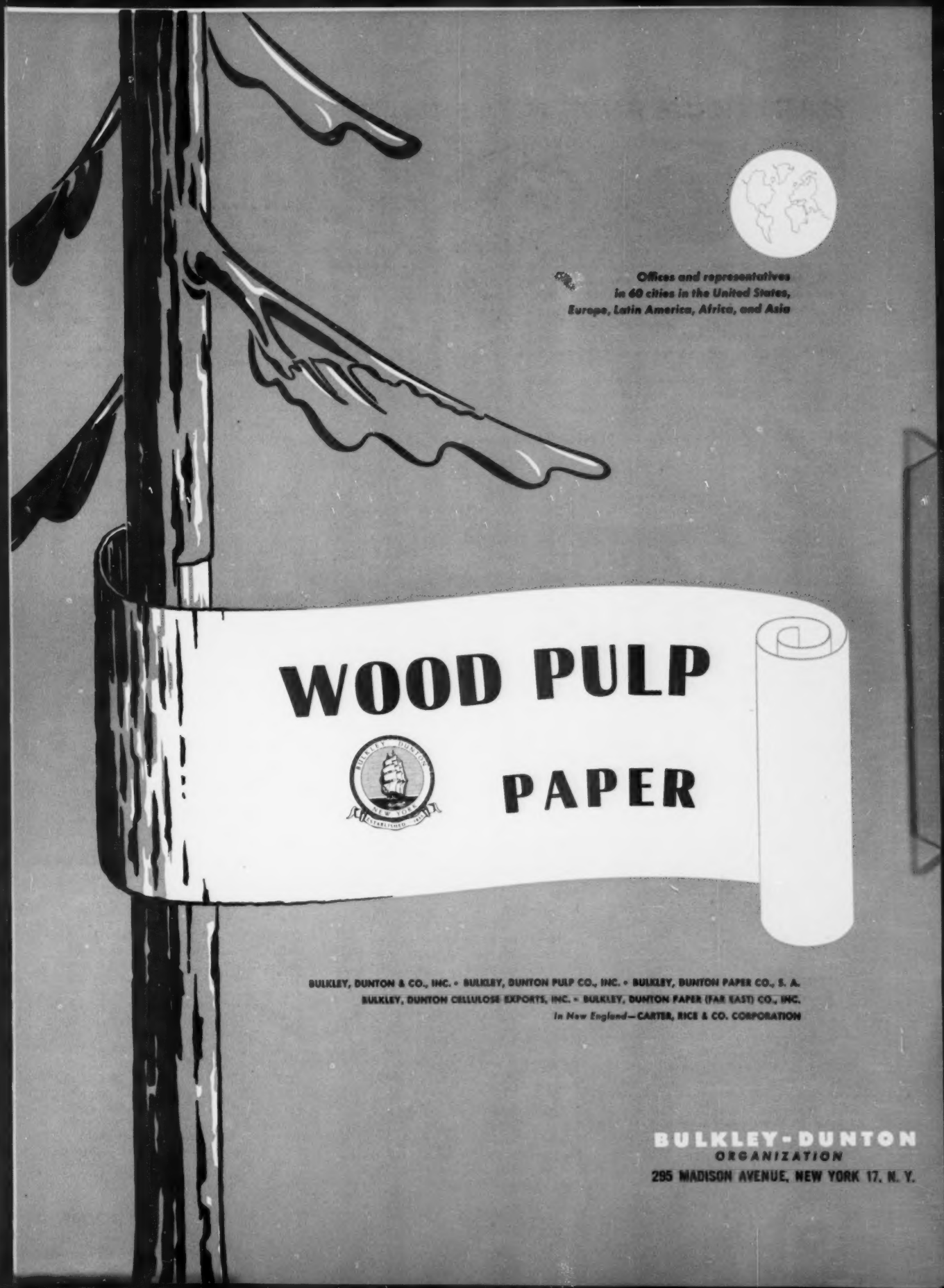
A native of Johnstown, Pa., he is a son of the late Mr. and Mrs. Evan Morgan du Pont. His father was associated with a brother, the late T. Coleman du Pont, in business ventures. T. Coleman du Pont was president of the Du Pont Co., 1902 to 1915.

Howard Street, National Vulcanized Fibre Co., and fifth vice pres. of the Superintendents Assn., also is on the program.

Betz for Warren

Warren Steam Pump Co., Inc., announces it will be represented in Louisiana, Mississippi, and Alabama, and sections of Florida and Arkansas by Betz Engineering Sales Co., 1225 Magazine St., New Orleans. This includes Warren and Warren-Quimby Pumps.

Allen W. Betz, (shown in picture) heads the Betz organization, is a graduate of Tulane in chemical engineering and was first employed by Freeport Sulphur Co. In 1939 he joined Gulf Engineering Co., New Orleans, as a sales and chemical engineer. Two years later he went with Barada & Page, Inc., industrical chemicals, becoming asst. branch manager. He returned to Gulf Engineering in 1943 as sales engineer; later as manager of industrial sales, until he resigned Jan. 31, 1951, to establish his own business.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in 60 cities in the United States,
Europe, Latin America, Africa, and Asia
WOOD PULP
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295 MADISON AVENUE, NEW YORK 17, N. Y.

MACHINE TENDER Munchausen Stories

Our papermakers and pulpmakers seem to have run out of "tall tales" temporarily after filling this column regularly for a year and a half—but now, after a lapse of two issues—we have another story for this corner. This one was contributed by a native of Louisiana, Ray Brown (shown in picture), now kraft pulp mill superintendent at the St. Helens Pulp & Paper Co.

We are delighted to send Mr. Brown his honorarium of $5 for this story.

If you have one to top it, or equal it, just send it along, addressed to Machine Tender Munchausen, PULP & PAPER, 71 Columbia St., Seattle 4, Wash., and if we use it, you will have made an easy fiver. It doesn't have to have a shred of truth, but it is desirable that it be remotely connected, at least, with a pulp or or paper mill.

Mr. Brown, when interviewed as to his own career, said that he is getting used to the peculiar ways of the Yankees after being born and raised in Louisiana. He claims he went to school at least three days, in place of a brother who had cut his foot, and that he was doing pretty well at cat-fishing till someone got into his live box and stole his catch, and this drove him to work in a pulp mill.

His story—which follows—was selected because it so aptly describes a *paper mill superintendent*, as he sometimes appears in the imagination of the *pulp mill superintendent*. Next issue—how about one of you *paper mill superintendents* giving us your description of a *pulp mill superintendent?*

Pulp Mill Superintendent's Description Of a Paper Mill Superintendent:

"Note: Any similarity of the following character to any one living, but almost dead, is purely intentional.

"Although I am a very young man myself, I have run into a lot of peculiar characters (most of them papermakers) in my time. The one I would like to tell about now is the grand-dad of all papermaking characters. When I say 'grand-dad' I mean just that. They say he made the first paper ever made in America. I believe that, but he hasn't made very much since. It is always amazing that he is still trying to make paper, for he has forgotten anything he might have learned before being drafted into the Army—for the Spanish-American War, I mean.

"This character may not be so bad for some people to work with, but me being a pulpmaker—and like all pulpmakers, *sensitive*, he used to drive me to an early grave. In some ways he was interesting to work with, for he did the most unexpected things like:

"1. Not making any paper.

"2. Not making good paper out of my pulp.

"3. Pulling me out of pulp in some mysterious way.

"4. Sending me an anonymous Christmas present—James Thurber's book, 'Is Sex Necessary?'

"They tell another story about him. I don't know if it's true, but it being my misfortune to have worked with him for several years, it's easy to believe. Every one used to say he was conservative. I don't know about that, but I do know that he didn't like to spend money.

"The story goes something like this: This character thought he was a great hunter. A bunch of fellows went deer hunting so he tagged along, and when they got up to this Dude Ranch they started renting horses at $10 per day. Now he wasn't about to pay $10 for a horse. The man had a small mule, so this fellow asked if he could rent it, and he was told yes, at $1 per day—so this character took it and started out through the woods, his feed dragging the ground, making a lot of noise and, of course, he couldn't find any deer. He finally stopped and tied the mule to a bush and started out on foot. After walking for some time, he got turned around, and as he was sneaking through the woods, he saw something move—he raised up his old muzzle loader and let fly. The poor mule dropped dead in his tracks and it cost the papermaker $200. I might add that he does his hunting from a rocking chair now.

"If any one had a younger papermaker, say about 60 years of age, they would have liked to trade, I would willingly have traded with them and thrown in a hopped up mullen tester to boot."

SOUTHERN SUPERINTENDENTS will hold their joint meeting in Jacksonville, Fla., on October 10-12, with the George Washington Hotel as scene of sessions. The joint meeting of Southern and Southeastern divisions will have Otha Winningham and Carl Welte as joint chairmen.

NAM Honors J. L. Coker

James L. Coker, president of Sonoco Products Co., Hartsville, S. C., has been honored by election as one of the six directors-at-large of the National Association of Manufacturers.

Personals

Southern Notes

ROBERT L. YODER has been transferred from pulp superintendent at Gulf States Paper Corp., Tuscaloosa, Ala., to that of personnel manager. Under him will be: J. M. Armstrong, Jr., employment director; C. C. Coughlin, safety director; Frank Parham, publicity director; Mary Duggan, insurance counselor; and, a training director. *MURPHY OWEN*, formerly chief chemist, has been made pulp mill superintendent, succeeding Mr. Yoder.

JOEL D. FERRY will serve as resident manager of the new Mexican plant of Sonoco Products Co., Hartsville, S.C. Mr. Ferry went to high school in Mexico and graduated from Stanford in 1941. He worked for International at Georgetown, S.C., and in 1947 returned to Mexico as sales manager for Corrugated Box Co.

STANLEY J. BOYD was promoted from pulp mill superintendent to second asst. supt. of No. 8 Project at Sonoco Products Co. His place as pulp mill head was filled by promotion of K. L. Kirven.

LOUIS E. WOLFSON, 39-year-old industrialist, principal stockholder, was elected chairman of the board of Merritt-Chapman & Scott Corp., April 4, succeeding Thomas A. Scott, 73, who continues as a director. Mr. Wolfson started his career with a pipe company in Florida, in partnership with a brother.

WALTER J. DAMTOFT, assistant secretary and treasurer of Champion Paper & Fibre, Canton, N.C., was recently re-elected vice chairman of the State Board of Conservation and Development.

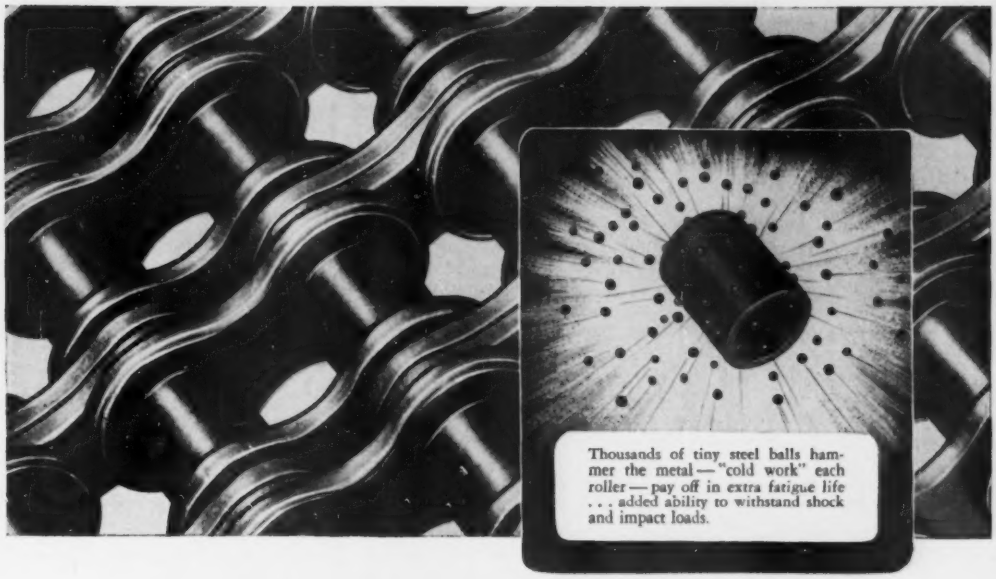
E. PUTNAM HEAD, district manager for Mason-Neilan Regulator Co., at Atlanta, recently announced removal of the office from 101 Marietta St., to 805 Peachtree NE, Room 457, near the Atlanta-Biltmore Hotel.

W. R. CRUTE, Champion division manager at Pasadena, Texas, was recently chosen as one of the men to be featured in a series of articles "Prominent Houston Men" by the Houston Chronicle.

HAROLD G. MACKLEM, who is the Assistant Plant Engineer at St. Regis mills in North Pensacola, Florida, who is active in the construction of the new mill addition there, belongs to a family which is well-known in the industry. His father is William Macklem, retired paper mill Engineer for Black-Clawson Company, and he is the nephew of Elmer Macklem, Vice President of Beloit Iron Works.

SAMUEL COPPER KNODE, vice president of Albermarle Manufacturing Co., and executive committee member of the Blotting Paper Manufacturers Association, died just prior to Paper Week.

GENE COWART has been named purchasing agent for Gulf States Paper Corp., Tuscaloosa, Ala. He succeeded Myron Hawkins, who returned to the traffic department.


Thousands of tiny steel balls hammer the metal — "cold work" each roller — pay off in extra fatigue life . . . added ability to withstand shock and impact loads.

Why you should be sure the roller chain you buy has

SHOT-PEENED ROLLERS

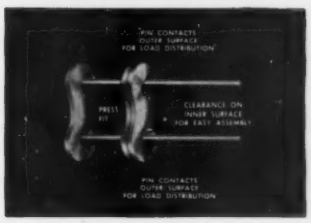
. . . one of the extra-strength features you get with every LINK-BELT Roller Chain

Look for the distinguishing darkened rollers on every roller chain you buy! They're your guarantee of extra fatigue life.

Shot-peening is just one of the added manufacturing refinements that make Link-Belt Precision Steel Roller Chain a longer-life chain. Controlled material selection and heat treating assure absolute uniformity . . . no weak members.

Link-Belt Roller Chain is available in single or multiple widths, in ⅜ to 3 in. single and double pitch. For the best in roller chain, get in touch with your nearest Link-Belt office.

Easier coupling and uncoupling without sacrificing load distribution


PIN CONTACTS OUTER SURFACE FOR LOAD DISTRIBUTION
PRESS FIT
CLEARANCE ON INNER SURFACE FOR EASY ASSEMBLY
PIN CONTACTS OUTER SURFACE FOR LOAD DISTRIBUTION

Patented E-Z Assembly feature of Link-Belt Precision Steel Roller Chain has won world-wide approval. Coupling and uncoupling of multiple width chains—right on the job—is far easier. There's absolutely no sacrifice of load distribution . . . no loss of the chain's remarkable performance. Press-fits between chain pins and middle bars have been modified. But full load-carrying capacity across the entire width of the chain has been maintained.

LINK-BELT

PRECISION STEEL ROLLER CHAIN

LINK-BELT COMPANY: Indianapolis 6, Chicago 9, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices, Factory Branch Stores and Distributors in principal cities. 12.331

NEWS IN BRIEF • • • AND BULLETINS

NEW PAPER CONTROLLER FOR UNITED KINGDOM

Sir A. Ralph Reed, who since the outbreak of World War II in 1939 has held one of the most important and powerful positions in the world's pulp and paper industry—that of Paper Controller of the United Kingdom—resigned that position Mar. 31 for health and business reasons. H. G. Paul, who was technical assistant in the Control, and later Assistant Controller, became Acting Paper Controller by appointment of the Board of Trade President . . . . . .

RAYONIER DEFERS ELECTION OF PRESIDENT

William R. Reed, of Seattle, executive vice president of Rayonier Inc., made a report to the annual meeting of Rayonier stockholders in New York, April 3, on the progress made to date in selecting a president for the company. Selection of a president has been under study by a special committee of the board. Pending filling of the vacancy, Mr. Reed stated the organization is functioning smoothly and efficiently and mills are operating at capacity. Mr. Reed, who also is president of Simpson Logging Co., has been functioning temporarily as Rayonier's chief executive since last November. .

THILMANY CERTIFICATE FOR EXPANSION

Thilmany Pulp and Paper Co., Kaukauna, Wis., has been granted a certificate of necessity to obtain materials for its expansion program and permitting amortization of the $2,962,000 cost in five year. Steel work is almost completed on the addition to the power plant and turbine room designed by Pfeifer & Shultz, Minneapolis. The "hot pond" for pre-treatment of wood and wood room improvements, including a new Fibre Making Processes 12x14 ft. barker already are in operation. A building to house Swenson brown stock washing equipment and another to house a new Beloit 137 in. Fourdrinier glassine paper machine are being constructed. . . . . .

ESPANOLA ADDS CAPACITY

KVP Co. Ltd., Canadian subsidiary of Kalamazoo Vegetable Parchment Co., operating a bleached kraft mill at Espanola, Ont., is planning $1,000,000 expansion this year, chiefly involving installation of new pulp drying equipment. Production, originally designed for 200 tons, has been averaging more than 275 tons daily. . . . . .

MORE NEWSPRINT FROM "KAP"

Expenditure of $5,000,000 at Kapuskasing, Ont., has been authorized by Spruce Falls Power & Paper Co. for expansion of the company's newsprint facilities, according to President C. H. Sage, who is a vice president of the parent corporation, Kimberly-Clark, at Neenah, Wis. Three paper machines will be rebuilt and other moves planned to boost newsprint output more than 12,000 tons a year. Kimberly-Clark has brought its new crepe wadding machine into production at Kapuskasing, and output in excess of 30 tons daily is anticipated. The 134 inch (wire width) machine was built by Dominion Engineering Co., Lachine, Que. . . . . .

SPECIALTY MILL LEASED TO CRANE

Pending completion of plans for the expansion of its range of products and the installation of new equipment now on order, L. L. Brown Paper Co. of Adams, Mass., has leased its fine and specialty paper manufacturing facilities of its Upper Mill (6 tons capacity daily) to Crane & Co., Dalton, Mass. L. L. Brown continues production in its Lower Mill (10 tons daily) in Adams, and will use part of the Upper Mill for storage and other purposes. . . . . .

H & W CONTINUES MOBILE EXPANSION

James L. Madden, president of Hollingsworth & Whitney, says that "During 1951, the company expects to spend approximately $5,000,000 to complete plant expansion at Mobile, Ala. (already spent $6,092,000 there), and approximately $1,400,000 for improvements at northern mills. We expect the new unit at Mobile, with exception of bleach plant, to begin operations about mid-year," he said. . . . . .

MCCABE RETURNS TO SCOTT PRESIDENCY

Thomas B. McCabe has returned to his post as president of Scott Paper Co., Chester, Pa., and made this the primary reason in his letter of resignation to President Truman from chairmanship of the Federal Reserve Board. Friends emphasized the move had no connection with recent difference of opinion between Treasury and Federal Reserve on the matter of interest rates for government securities. . . . . .

STUMPAGE PRICE "CHAOS" DEPLORED

All government agencies dealing in stumpage as the U. S. Forest Service, the Indian Service, and the Bureau of Land Management, were postponing timber sale awards and withholding stumpage from sale, pending a clarification of the price regulations, up to the time this issue went to press. The need to clarify stumpage price ceiling regulations and bring uniformity out of "chaos" as regards ceiling prices on government stumpage, is imperative, commented Stuart Moir, of Western Forestry and Conservation Assn. "The existing situation, in which each bureau has its own individual interpretation of price regulations, is untenable," he said, adding: "It is an utterly absurd predicament for the operator, dependent upon government timber, to be placed in." . . . . . .

Bulletin:

TWO BIG WESTERN INDUSTRIES MERGE

H. R. MacMillan (left) and J. H. Bloedel (right), Chairmen of two of the largest forest industries on the continent, now merging.

Merger of H. R. MacMillan Export Co. and Bloedel, Stewart & Welch, two of the largest organizations in the Pacific Northwest forest industry, is planned, and will be effected in the near future if directors and shareholders of the two companies approve.

The deal represents the biggest amalgamation of its kind in Western Canada in many years, the combined resources represented being estimated at over $100,000,000.

Both the MacMillan and Bloedel companies entered the pulp field within recent years, the 190 ton unbleached sulfate mill of the Bloedel company having gone into production in 1947 while the 250 ton sulfate mill of the MacMillan company at Harmac, where a bleach plant was opened this month, went into operation last July.

Capacity of the Harmac plant will be more than doubled by 280 to 300 tons daily increase at a cost of $16,000,000 to $17,000,000.

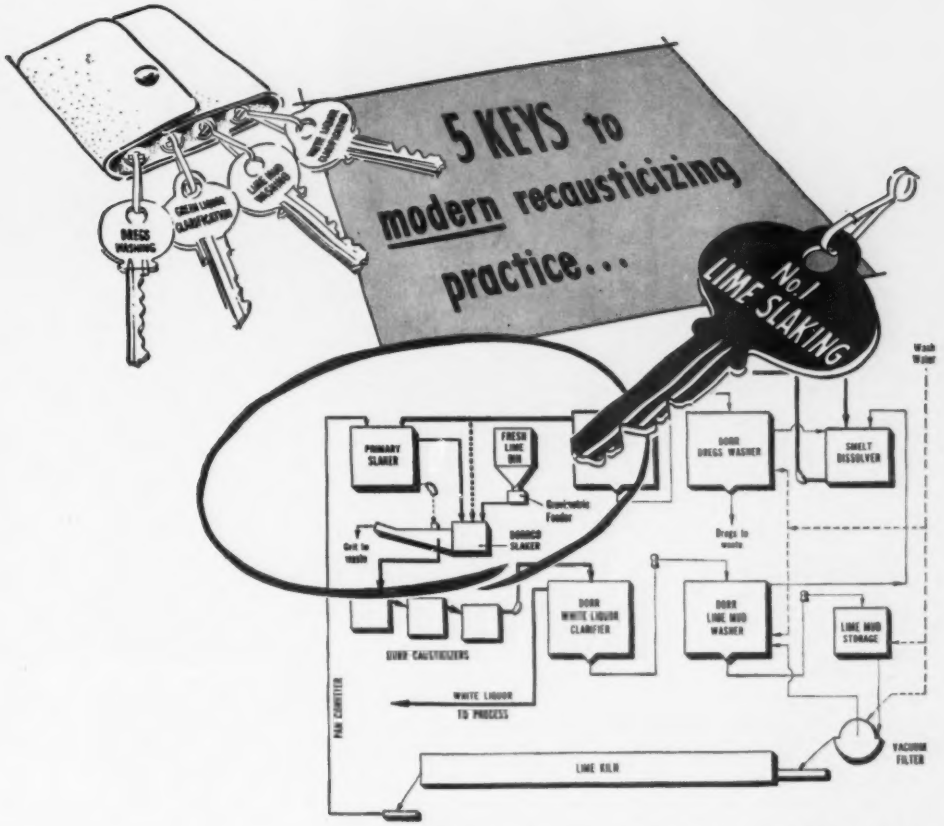
Pending final ratification, the combined company will be known as MacMillan & Bloedel, Ltd. Its present and planned output totalling more than 700 tons of pulp daily will rank it among the major producers of this industry. It will be one of the largest producers of pulp in the world derived mainly from mill waste and salvage logs and one of the largest manufacturers of chemical pulp for the open pulp market.

Pulpwood Record at Savannah

Union Bag & Paper Corp., Savannah, Ga., recently solved a serious wood storage problem, when 693 railroad cars of pulpwood were awaiting unloading, by quickly clearing an additional storage area of trees and brush and laying 600 feet of new r. r. track.

Portland Draws Many

The National Convention of the Superintendents Association, scheduled for the Hotel Multnomah, Portland, Ore., June 24-28, highlighted by a woods trip to the Oregon Coast, may set some kind of record. Over 500 reservations had already been received by April 10.



Latest development in the Dorr Continuous Recausticizing System is a two-stage slaking setup. It provides an even higher degree of operating efficiency to the System . . . the standard of the Alkaline Pulping Industry.

Here's how two-stage slaking improves the recausticizing operation . . .

- Troublesome handling of hot lime is reduced to a minimum . . . need for reburned lime bin is eliminated.
- Accurate weighing of makeup lime results in "end point" control . . . reduces possibility of over or under liming.
- Uniform white liquor strength is maintained regardless of fluctuations in kiln discharge.

Two-stage lime slaking is only one of the important unit operations in The Dorr System. A new bulletin, #3301, describing the recausticizing operation in detail, will be sent on request. Address inquiries to The Dorr Company, Barry Place, Stamford, Conn.; or in Canada to The Dorr Company, 80 Richmond Street, West, Toronto 1.

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Personals

Canadian Notes

B. F. AVERY, general manager of KVP Co., Ltd., Espanola, Ont., since 1946, has been made president of the company, succeeding the late Ralph Hayward. *E. NORVAL HUNTER*, manager of manufacturing since the company's mill was brought into production at Espanola, Ont., has been made vice president and treasurer. *THOMAS W. PECK*, secretary of the parent corporation Kalamazoo Vegetable Parchment Co., is secretary of KVP Co. Ltd.

H. R. MACMILLAN, chairman of the board, H. R. MacMillan Export Co., operating a pulp mill at Harmac, Vancouver Island, as well as several sawmills, has been appointed Canada's representative on the North Atlantic Production Board. He was Canada's timber controller and cargo shipbuilding chief in World War II.

LOUIS PUMPHREY has been appointed general superintendent at Westminster Paper Co.'s mill at New Westminster, B. C., according to announcement by Mill Manager *JOHN ASHBY*. *MAX BAILEY* and *CLARENCE TAYLOR* have been named assistant superintendents. All three have been with the company since shortly after the mill's startup in 1922.

D. G. DRISCOLL, president of Sorg Paper Co. of Middletown, O., visited Vancouver, B.C., late in March to attend the first directors meeting of Elk Falls Co. in which the Sorg organization is interested.

DR. D. L. SHERK, who was with the Celanese Corp. of America's research staff at Cumberland, Md., until recently, has joined the company's subsidiary, Columbia Cellulose Co., at Watson Island, B.C., as chief chemist.

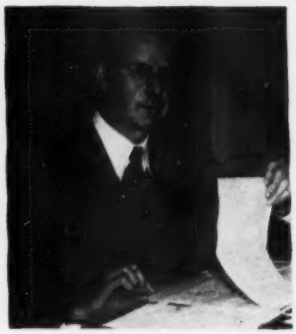
M. E. BARTLETT has been appointed to *D. D. CARR-HARRIS* plant engineer for Columbia Cellulose Co., Watson Island, B.C.

R. W. TURNER, director and joint general manager of Bowater Paper Co. and Paper Mill and Industrial Supply Co., has returned to Australia after touring the United States, Canada, Scandinavia, Holland, France and Italy.

Members of the executive committee of the Australian Pulp and Paper Industry Technical Association elected to serve for two years are *H. B. SOMERSET*, *G. W. ELLIS* and *J. L. SOMERVILE*, while those elected for one year are *C. H. WILTSHIRE*, *W. E. COHEN*, and *J. D. ANDREWS*. Retiring president is *L. R. BENJAMIN*.

A. B. HEMMINGSEN, of the Tokyo importing firm of that name, has been in Vancouver, B.C., conferring with *H. J. McKENZIE*, manager of Export Sales Co., representing Powell River Co. and Pacific Mills in Far Eastern markets.

H. WYATT JOHNSON, manager of the Sutherland Refining Co. in Canada, has established new offices in the Sun Life Building, Montreal.



G. D. (DON) HUMPHREY (left), newly appointed General Manager, Raw Materials Division of Alaska Pine & Cellulose Co., Vancouver, B.C., new integration of B.C. Pulp & Paper Co. mills with the Alaska Pine Co. sawmills and logging operations, jointly owned by Alaska Pine and Abitibi Power & Paper Co. PAUL JORGENSEN (right), formerly head of B.C. Pulp & Paper Co.'s Logging Division, has been appointed Assistant General Manager, Raw Materials Division, Alaska Pine & Cellulose Co., Vancouver, B.C.

JOINT SUMMER MEETING of Empire State Section of TAPPI and Niagara Branch of Technical Section of Canadian Association will take place June 19-21, 1952, at General Brock Hotel in Niagara Falls, Ont. Although over a year away, this group is already planning for it. (Left to Right): A. P. JEWETT, Provincial Paper Co., Toronto; DR. J. S. REICHERT, DuPont Co., Niagara Falls, N. Y., (General Chairman); S. G. STAPLEY, Provincial Paper, Thorold, Ont., (a Co-Chairman); DR. L. R. THIESMEYER, Pulp and Paper Research Institute, Montreal; and I. V. EARLE, Upson Co., Lockport, N. Y. (also Co-Chairman).

JOHN ASHBY, mill manager, Westminster Paper Co., New Westminster, B.C., has been in eastern Canada and the U.S. placing orders for new machinery.

Personnel In New British Columbia Merger

Several personnel changes have resulted from the merger of Alaska Pine Co. and B. C. Pulp & Paper Co., which will soon be completed with the formation of Alaska Pine & Cellulose, Ltd., with Leon Koerner, president, and Walter Koerner vice president.

As previously announced in PULP & PAPER, Abitibi Power & Paper Co., purchased B. C. Pulp and then integrated its operations with those of Alaska Pine in British Columbia. D. W. Ambridge, president of Abitibi, will be chairman of the new company.

Don Humphrey, formerly manager of B. C. Pulp, becomes general manager of the division of raw material requirement, and his assistant is Paul Jorgensen, formerly head of B. C. Pulp's logging division. Ross Douglas has been appointed chief forester of the new company. R. B. Keay, at present comptroller for the Alaska Pine group, will hold that position with the new Alaska Pine and Cellulose, Ltd., whose general manager is Les Cleminson, formerly of Abitibi's head office staff.

Hansel Reports On European Trip

Sydney Hansel, head of Hansel Engineering Co. of Vancouver, B.C., and Seattle, returned recently from a visit to Sweden, other European countries, where he was invited to study barking problems.

Mr. Hansel's ring-type hydraulic barkers, used in several Pacific Northwest mills, are being designed for handling Eastern and Southern U.S. logs, and the Hansel company is working on complete wood preparation plant designs.

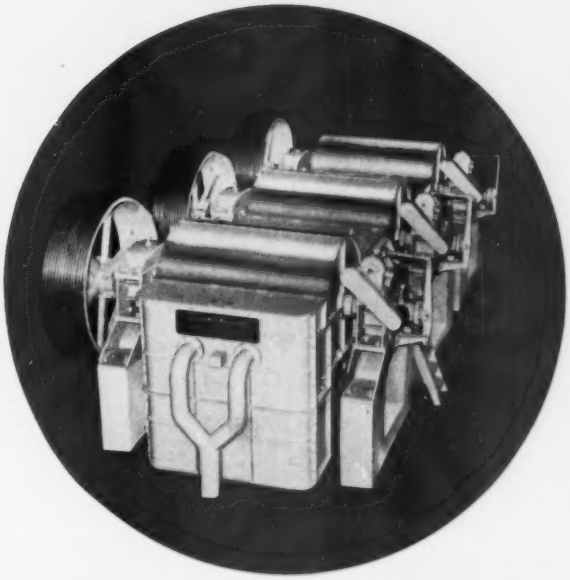
Mr. Hansel says that Swedish mills have shown interest in the possibility of using hydraulic barkers to handle logs of tree length or in excess of the 4 or 5 feet lengths.

In France, Mr. Hansel learned that one pulp manufacturer is surveying possibilities of establishing a mill on the Pacific coast.

FREEMAN NICHOLS, formerly with the Kimberly-Clark head office staff in Neenah, Wis., has been appointed to the new position of assistant chief engineer of Spruce Falls Power & Paper Co., at Kapuskasing, Ont.

G. F. ROBERTSON, formerly chief construction engineer at Fairfield mill of Australian Paper Manufacturers, has been transferred to the company's Botany mill and has been replaced at Fairfield by *A. V. GAMMIE* of the A.P.M. head office design staff.

This may never happen . . .



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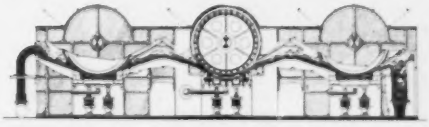
VICTORY BEATERS are made in two styles — **single roll** and **multi-roll**. The **single roll** units will handle batches as small as 500 pounds. The **multi-roll** units will treat 150 or more tons per day on a continuous production basis.

. . . BUT WHY TAKE A CHANCE? The world outlook promises one thing for sure — that paper AND power will be at a premium. You'll want to make *more* of one and use *less* of the other.

The *Controlled Flow* VICTORY BEATER deals you a winning hand in the game of Supply vs. Demand. There's nothing like it in fiber treatment history! It saves power, increases production, improves quality and slashes maintenance costs — all of which will be vital factors in the days ahead.

We'll be happy to rush you all the facts and figures on the *Controlled Flow* VICTORY BEATER, so don't delay — *get in touch with us immediately. Write, phone or wire for Booklet PP 551.*



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THE SULFUR CLOUD

BY-PRODUCT PRODUCTION IN SIX MONTHS?

In an effort to determine what another sulfur-using industry was doing in the crisis, PULP & PAPER contacted Dr. Russell Coleman, secretary of the National Fertilizer Association in Washington. Agriculture is perhaps the biggest sulfur consumer, thus competes strongest with pulp making, chiefly in its consumption of sulfuric acid fertilizers. Dr. Coleman was inclined to view the future supply as questionable, indicated some resignation to what in agriculture would be the equivalent of shutdowns in the pulp field. Sulfur supply, said he, rested on exports and these in turn rested on State Department policy. But he appeared to have concluded the same as many a pulp mill man—that there would be no solution until there was a definite re-examination of imports and the result brought to bear on very high levels.

Nonetheless, in well-informed quarters of the pulp field there was some increased optimism following the return of the March sulfur cloud. It lay chiefly in studies which indicated that new sulfur by-product production can be made available within six months of an order for the equipment. Only factors missing were who—and how. But that it would be done, by re-examination of exports, by regular suppliers, or by the pulp industry itself in some instances where practical—if not by emergency purchases of high cost foreign sulfur being offered in the U.S.—seemed a good safe bet. In March the government limited exports to 200,000 tons. And Sicily planned expansion to take up this U. S. slack.

A Close Look

A careful look at the anticipated capacity of the U. S. pulp industry in terms of market pulp—even omitting several projects which seem likely for the future—were rather startling to a pulp and paper industry which had been thinking steadily in terms of shortages for a long period. The capacity had been showing sharp rise, despite equally sharp imports, since early in 1950. Now, the best observers said, the increase by 1952 could be as much as two million tons, maybe more. As this issue closed, it was planned to combine U. S. estimates with a Canadian survey, look at the picture from the North American standpoint. Could be, the more cautious lookers were inclined to conclude, the fiber shortage could soon ease.

But another group of observers felt that future capacity statistics were not considerate enough of realities involved in constructing new capacity under the handicaps of restrictions, manpower shortages, and questionable materials supplies.

Two New Sulfur Mines Coming In

Contrary to some published reports elsewhere, there may not be too great a disparity between the forecasts of sulfur shortages for 1951 made by the U. S. sulfur industry and by Gabriel J. Ticoulat, chief of the Pulp and Paper Section of the National Production Authority in Washington, D.C., (who is on loan from Crown Zellerbach).

It would appear that there is now about 100,000 tons disparity between Mr. Ticoulat's estimate of the 1951 shortage, and the estimate of the industry. In other words, the latter admit the possibility of a 200,000-ton shortage; but they say also it is only a possibility, not a probability, because thus far the production is equaling 1950.

Production of sulfur in Louisiana reached a record-breaking 1,243,020 tons during 1950—more than double what it was 10 years ago. And for 1951, a new production record is anticipated.

All of the state's sulfur is produced at a single mine operated by the Freeport Sulphur Co. in Plaquemines parish approximately 50 miles below New Orleans. The Grande Ecaille mine in Plaquemines and six others in Texas are the source of all the natural sulfur produced in the U. S. and of approximately 45% of the world's supply of the "magic mineral."

Despite an overall Gulf coast production of 5,190,784 tons last year compared to 3,130,276 tons a decade ago, sulfur is in short supply due to tremendous demands.

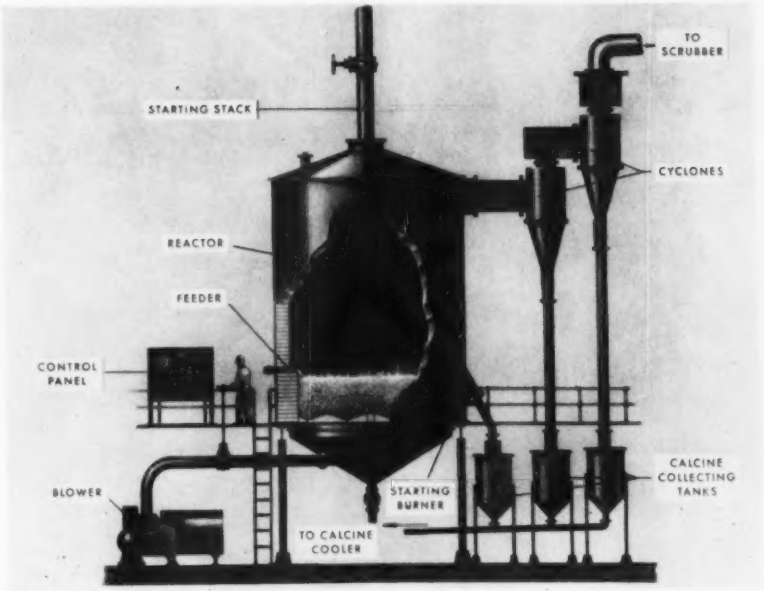
It changes rock into fertilizer, wood pulp into rayon, and paper pulps, soft rubber into hard. It is used in the manufacture of dyes and drugs, cars and chemicals, fuel and firecrackers, paint, leather and lubricants, soap and steel.

Grande Ecaille mine has benefited from an $8,000,000 plant expansion program which has sent production there to the limit.

A new Stark Dome mine of Jefferson Lake Sulphur Co. near Lake Charles, La., costing $1,100,000, was to be completed this spring. The company declined to estimate the mine's potential production.

Another new sulfur plant is expected to go into operation around September at Spindletop in Texas, not far from the Jefferson Lake plant.

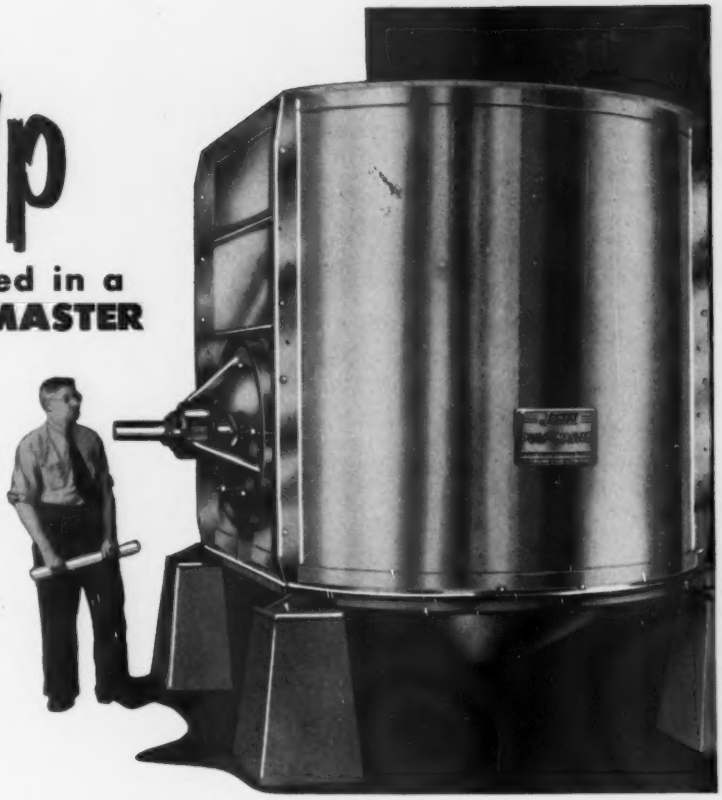
THE FLUO-SOLID ROASTER



Applicability of the very simple and efficient Dorrco FluoSolids System to the roasting iron pyrite for the production of SO_2 gas has been announced The Dorr Co., Engineers, of Stamford, Conn. Producers of sulfuric acid and users of sulfur dioxide in the sulfite pulp industry, faced with critical curtailment of sulfur sup-

Pulp

is really pulped in a JONES PULP-MASTER



The Jones Pulp-Master* is one of those machines that does an outstanding job because it's built for just that purpose. It completely disintegrates new pulp, wastepaper or wet strength papers in record time. It can be used for atmospheric cooking of straw and similar materials, has a refining area to break up fibre bundles and to clear stock. Power consumption is low, maintenance is held to the minimum. SKF Spherical Roller Bearings are used to smooth the path of power. They were selected because they are more than adequate for extremes of shock loading, because long experience has proved the complete dependability of SKF Bearings in heavy duty work. Paper mill machinery builders prefer SKF because SKF can always help put the right bearing in the right place.

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*For details, write E. D. Jones & Sons Company, Pittsfield, Massachusetts.

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tolerance control
surface finish
product uniformity
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plies, have indicated to PULP & PAPER that this method of tapping an alternate source of SO_2 is of lively current interest.

Two Pacific Coast men, prominent in the industry, flew recently to Red Lake, 300 miles north of Winnipeg, to see this Dorr system as applied to process pyrites for removal of gold ore by gold miners. In these cases, the SO_2 is released in the atmosphere.

Either pyrite or pyrrhotite as flotation concentrate without further grinding, or massive pyrite or pyrrhotite crushed to pass approximately 14-mesh, may be self-roasted by FluoSolids. There are no moving parts within a FS Reactor and the manufacturer claims lower investment and operating costs than with conventional roasting methods.

When roasting 48% sulfur pyrite at 900°C with a minimum of excess air, gas strengths up to 14 to 15% SO_2 are obtained and a maximum of 1½% total sulfur is left in the calcine. Under these conditions, SO_3 formation is kept to a minimum. With pyrrhotite, gas strength will be up to 12 to 13% SO_2 depending upon the analysis of the raw material.

Pyrite or pyrrhotite feed may be introduced substantially dry or as a slurry repulped to approximately 80% solids, depending upon local conditions. Calcine can be quenched in water for sluicing to waste or process, or caught dry and cooled to handling temperature, as desired.

Roasting temperatures are accurately controlled to avoid sintering and to minimize formation of ferrites of base metals if present. If the calcine is to be used for steel making, any desired amount of sulfur can be left in the calcine to act as sinter fuel. Or if the copper or zinc content is too high for steel making, the roast can be conducted so as to sulphate the copper and zinc, after which these metals can be leached out to meet desired specifications.

New Sulfur Source For Coast Mills

Operators of sulfite pulp mills in British Columbia believe that they will be able to offset deficiency in sulfur supplies from traditional sources (Texas) by shipments from Alberta, where two companies are being organized to manufacture sulfur as a by-product of natural gases in the Calgary and Edmonton areas. Eventually there may be three recovery plants in Alberta selling principally to the coast pulp industry.

Contracts were to be signed in April between suppliers and representatives of three British Columbia pulp manufacturers. Contracts would be for 15 to 20 thousand tons a year, probably more than prospective cutbacks from Texas.

Use of sulfur in British Columbia this year will be greater than ever owing to entry of Columbia Cellulose Co.'s new pulp mill at Watson Island and full-year's operation of H. R. MacMillan Export Co. mill at Harmac, Vancouver Island. It has been customary for all coast mills to maintain a full year's inventory of sulfur.

Another possible sulfur source is Japan.

TO PRODUCE ELEMENTAL SULFUR IN ALBERTA GAS FIELD

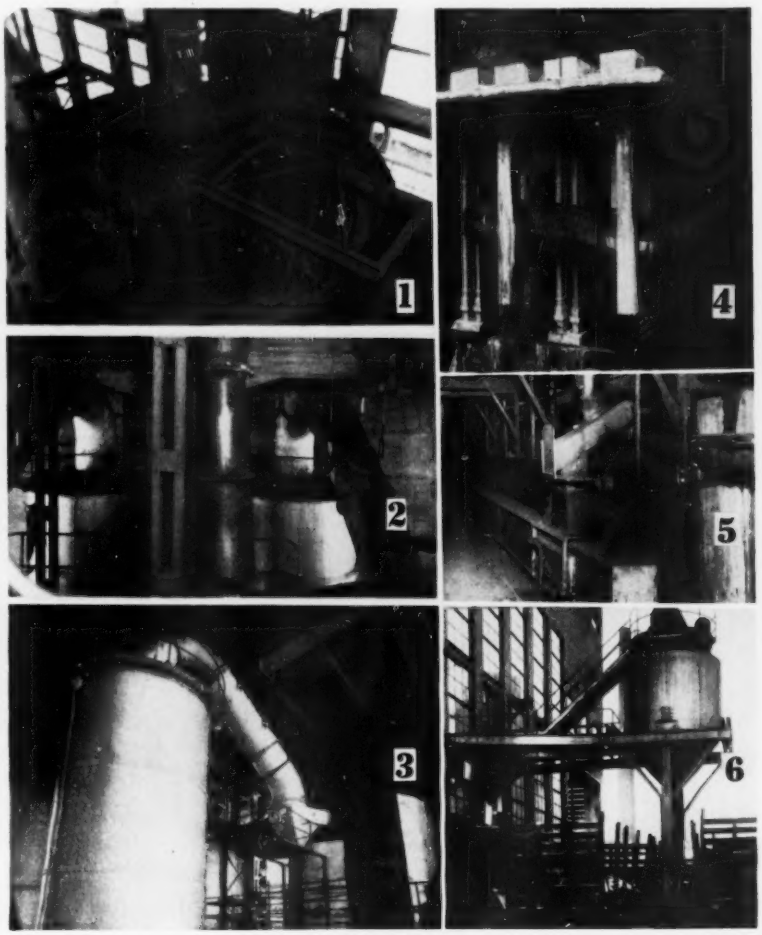
Harold Foley, president of Powell River Co., has announced the first major move by a Canadian pulp and paper company to relieve the sulfur shortage—Powell River joining with Shell Oil Co. in building a half million dollar plant near Calgary, Alberta, to produce initially 10,000 tons of elemental sulfur annually within a year. Production will be from the Jumping Pound natural gas field.

Existence of the gas field has been known for some 20 years, but it was "sour" (high sulfur content) and there was no ready market for the sulfur. Now the sulfur will be extracted and the gas will be piped 15 miles into Calgary to augment gas supply there.

HOW FINNS BURN PYRITES

Explanation of Picture Story—Views No. 1 to 6

With sulfur still short, North American sulfite mill operators are showing increasing interest in the processes followed by Finnish mills, most of which for many years have been burning pyrites to maintain their supply. In Finland, pyrite is burned either by the Nichols-Freeman or Lurgi (German) process, the *Lurgi furnace shown in the accompanying photograph (1)* having a capacity of 18 tons of pyrites, which is first dried and sprayed into the chamber like powdered coal. The *gases pass through pipes (2)* to *washing towers (3)*. They are cooled by *water tubes (4)* to below 40 degrees Cent., passed through Cottrell precipitators and finally to the acid tower, after which they go to the wet precipitators. Flue ash is removed by *Redler conveyer (5)* and conventional chain conveyer and deposited in *the container (6)* outside the mill building. The photographs were supplied to PULP & PAPER by Kymmene Aktiebolag, Finland's largest wood-using industry, whose technical chief, Bjorn Sucksdorff, has been touring mills in Canada and the U.S. this spring. An interview with Mr. Sucksdorff appeared in March PULP & PAPER, page 35. Kymmene's two sulfite mills at Kuusankoski, Finland, produce 350 tons of pulp daily.



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That's why equipment drained with Yarways gets "hotter, sooner" . . . why better quality and higher production rates are so often reported, and at lower steam consumption per unit produced.

The Yarway "Impulse" design makes this possible—also makes possible small size, only one moving part, straight-through piping, low cost, low maintenance, . . . and it's good for all pressures.

Over 750,000 Yarway Impulse Steam Traps have already been installed. You can buy them at a nearby industrial distributor—216 sell Yarways.

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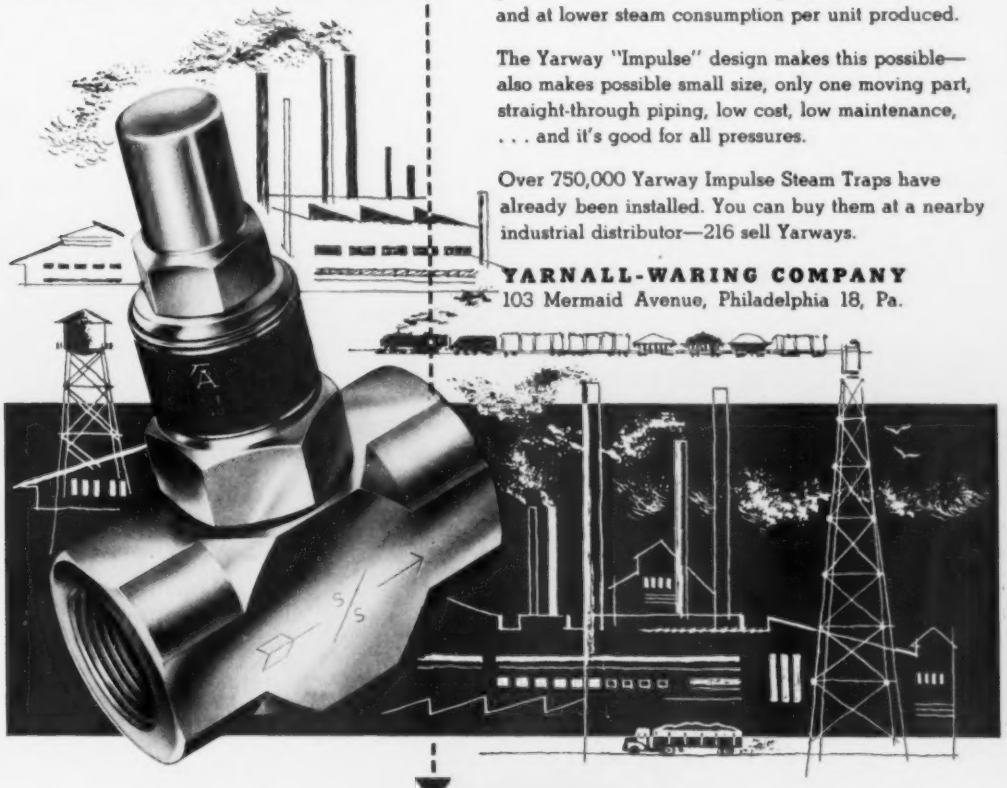

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Personals

Midwest Notes

LOUIS QUARLES, of Milwaukee, the new director of Kimberly-Clark, succeeding the late Walter Kasten, graduated from law at Michigan in 1905, was general counsel for K-C, is a director of Northwestern Life, a director and executive committeeman for Allis-Chalmers, a past president of the Milwaukee bar and has sailed his yacht from the Great Lakes to Gulf of Mexico.

ARNOLD SORENSON, formerly power and maintenance engineer with Bergstrom Paper Co., Menasha, Wis., has been appointed acting superintendent of the Neenah-Menasha sewage disposal plant. He was appointed by *WILLIAM H. CLIFFORD*, the president of the sewage commission who is also vice president of Kimberly-Clark.

ERNST MAHLER, Kimberly-Clark's executive vice president, was made an honorary member of the Valley Iron Works Quarter Century Club at Appleton. He is a vice president and a director of Valley Iron and has been on its board since 1920.

ROBERT GOETZMAN, who is in charge of glassine and greaseproof papers off the machines at Thilmany Pulp & Paper Co., has been voted the Man of the Year award of Kaukauna, Wis., by the Kaukauna Junior Chamber of Commerce. It is awarded for outstanding accomplishments in his own work and in civic organizations. Bob started at Thilmany in 1933, working on the rewinders.

STUART B. SUTPHIN JR., long prominent in the paper stock industry and board chairman and former president of I. V. Sutphin Co., of Cincinnati, with associate companies in seven Southern cities, died Mar. 10 at Cincinnati. He was 69.

JOHN D. DICKSON, JR., Midwest sales representative for Stowe-Woodward, Inc., rubber manufacturers has been confined by a serious knee injury and a resultant operation. Jack makes his home at Kalamazoo, but the injury occurred at Cloquet, Minn., where he was participating in a volley ball game with paper mill friends. He returned to Kalamazoo on crutches, but on March 13 underwent surgery at Borgess Hospital where badly torn ligaments were repaired.

HOMER HEEGE, field sales manager of Sutherland Paper Co., died of a coronary ailment Feb. 8. With Sutherland since 1931, he held his last position since 1942.

"Rapids" Gets New Hotel

George W. Mead, manager since 1902 and president since 1916 of Consolidated Water Power & Paper Co., until his recent retirement, has in recent months devoted much of his time to preparing plans for a new 86-room hotel being built in Wisconsin Rapids by Consolidated.

In past year he has been active in beautifying the Wisconsin River banks near the mills and through his efforts, Consolidated deeded to the city a piece of riverside property for a new park.

RALPH J. KNOLL, Staff Technical Director, Scott Paper Co. He stressed importance of statistical production controls at Ohio TAPPI meet in Cincinnati.

COLIN GARDNER III, vice president, operations of The Gardner Board and Carton Co., announces appointment of *RAPHAEL BLOCK* as coordinator of planning and scheduling for all operations. Mr. Block, graduate of University of Chicago, served as a Major in the Army Air Corps, 1942 to 1945; was public relations director of the Folding Paper Box Association and the William W. Fitzhugh Co., in advertising in New York.

COLIN GARDNER, executive vice president of the Gardner Board and Carton Co., Middletown, O., announces appointment of *CHARLES K. PIGMAN* as sales service engineer. Mr. Pigman, who was Carton plant superintendent, will visit the plants of customers to help solve their packaging problems.

NICHOLAS LOM, 68 years old, has finally retired after working 56 years in Wisconsin and Minnesota mills. For the past 34 he has been foreman and held other jobs at Combined Locks Paper Co., and before that with Little Chute mill, before Combined bought it. He also worked at Kimberly, Kaukauna, Niagara, Wisconsin Rapids, Saukville and Sartell, Minn.

BERNEY LUFF has been promoted from assistant superintendent to mill superintendent at Fir-Tex Insulating Board Co., St. Helens, Ore., filling vacancy resulting from promotion of V. M. Anderson to mill manager. *WILLIAM WOOLSTENHULME*, tour foreman, was advanced to assistant superintendent.

DWIGHT NELSON of Marathon Corp. has moved to Sunnyside, Wash., to be master mechanic in the new Marathon converting plant there. He was on the Menasha, Wis., plant staff.

C. W. Schweers Heads Sales, Allis-Chalmers Machinery Div.

Chester W. Schweers (in picture) has been named director of sales of Allis-Chalmers general machinery division, according to J. L. Singleton, vice president of the division.

Mr. Schweers, an electrical engineering graduate of Texas A. & M., was New Orleans sales representative, 1930 to 1942, when he was named manager of the Houston office. In 1947 he became manager of the Los Angeles district office. In 1950 he was appointed manager of the New England Region.

McCormick, M&O And St. Regis Veteran, Dies

E. L. McCormick, veteran general superintendent of the Minnesota & Ontario operations at International Falls, Minn., until recent retirement to an advisory status, and prior to that, head of operations in all of the St. Regis mills of Northern New York, died at the age of 66 recently at San Bernardino, in Southern California. He was widely known in the New York industry before going to Minnesota.

Advisor in Washington

Ted R. Neely of Marathon Corp., Menasha, Wis., has been named advisor to the Office of Price Stabilization in Washington, D.C., on a temporary basis. He will develop price regulations for the waxed paper industry.

How Green Bay Semichem Plant Was Engineered

Clyde Faukender, reminiscing recently, gave us an interesting sidelight on the designing of the semichemical plant of Green Bay Pulp & Paper Co. This is certainly one of the very first semichem layouts in the Midwest, and some industry experts believe it to be actually the first in U.S. on a commercial basis. (A complete illustrated description in PULP & PAPER, Jan. 1951 issue). Mr. Faukender, technical director of Hoberg Paper Mills, was in charge of the Green Bay design by permission of his own firm.

Gathering helpers, he transformed the basement of his home into an engineering and draftsman's office, and here, at 1312 Dousman St., Green Bay, the midnight oil was burned and many a salesman found his snowy way after hours.

The only drawback, and this Mr. Faukender mentions fondly, was the interest taken in proceedings by his two young daughters, Linda and Patricia Faukender. For more than a year prior to May, 1949, when the plant went in, the Faukender young ladies found delight in the appurtenances of engineering in the home, as well as in interrupting the work.

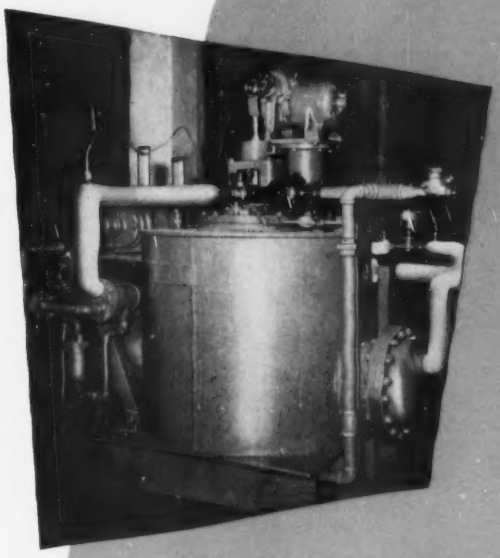
PATRICK J. PATTON has been appointed Milwaukee manager for the Commercial Sales Division of the De Laval Steam Turbine Company of Trenton, New Jersey. He will handle the sales of De Laval turbines, pumps and blowers in Wisconsin, with headquarters at 1932 North 117th Street, Wauwatosa, Wisconsin.

Mr. Patton's wide experience in the heavy machinery field makes him well qualified for this new appointment. Prior to joining De Laval in 1950, he was a regional sales supervisor for Worthington Pump and Machinery Corp. Before that he was a division sales manager for the A. O. Smith Corp.

If additional information is required please contact the Advertising Department, De Laval Steam Turbine Company, Trenton 2, New Jersey.

ANOTHER PRACTICAL PAPER
PROBLEM SOLVED BY
HERCULES RESEARCH

Now—a New Simplified Hercules Automatic Emulsifier



HERCULES' TECHNICAL RESEARCH in the rosin size field has once again resulted in an improved, amazingly simple, automatic emulsifying unit that merits the attention of paper manufacturers everywhere. This new automatic emulsifier is lower in price than the first Hercules automatic emulsifying unit introduced to the paper trade in 1948.

The original Hercules automatic emulsifying unit was the first in its field, and offered a completely new technique in handling and emulsifying paste rosin size.

Twenty paper mills have already installed this revolutionary rosin size emulsifying process, and additional units are scheduled for early installation. Write for details.

HERCULES POWDER COMPANY

965 KING STREET, WILMINGTON, DELAWARE

SIZING MATERIALS AND CHEMICALS FOR PAPER

Personals

Northeast Notes

HARRY S. CUTLER, United Board & Carton Corp., Lockport, N. Y., chairman of the New York-Canadian Division of the Superintendents, has announced appointment of *LESTER D. CARNAR*, Lockport Felt Co., Newfane, New York, as secretary of the division. Mr. Carner succeeds *WHITNEY LODDENGAARD*, United Board & Carton, Syracuse, because of his illness.

VERNON C. WATTERS has joined Knowlton Brothers, Inc., Watertown, N.Y., as mill superintendent. Formerly, he was with St. Lawrence Paper Corp., Norfolk, N. Y.

ARNO W. NICKERSON has moved offices of his engineering firm from 441 Lexington Ave., New York 17, N. Y., to 175 Main St., White Plains, N. Y. and will operate under the name, Arno W. Nickerson, Inc. Mr. Nickerson has served the industry for 17 years. Clyde A. Benson, chief engineer, will continue to serve in that capacity and will be vice president of the company.

JOHN KENNEDY, superintendent, Champion-International Co., Lawrence, Mass., is to address Connecticut Valley Superintendents May 18 at the Roger Smith Hotel, Holyoke, on quality control, operations control and preventive maintenance as guiding factors of mill supervision.

RICHARD V. ASHTON has joined Champion-International Co., Lawrence, Mass., taking charge of field activities in pulpwood procurement, with capacity of forester. Mr. Ashton is living in Concord, New Hampshire, and will operate from his home. Mr. Ashton has been with New York State College of Forestry and was assistant to the director at Charles Lathrop Pack Demonstration Forest at Warrensburg, N. Y.

W. C. MacADAM, pulpwood manager and assistant purchasing agent of Champion-International Co. was elected to serve a second term as New England Section chairman of the Society of American Foresters at meeting in Boston.

CHARLES LUKENS HUSTON, pioneer steel maker and first vice president of Lukens Steel Co., Coatesville, Pa., died in March at his home in that city at the age of 94. The previous December he had celebrated his 75th year with the company. A contemporary of Carnegie and Schwab, Mr. Huston was among the pioneer steel masters of America; he held several vital patents in connection with manufacture and designed the world's largest plate mill for Lukens in Coatesville. He is survived by his wife, and two sons, Stewart and Charles Huston, Jr., secretary and president respectively of Lukens.

Warren Representatives

To meet the demands of expansion in the Baltimore area, Warren Steam Pump Co., Inc., Warren, Mass., has appointed Harry W. Faunt Le Roy & Associates, Standard Oil Building, Baltimore, as their agents.

DR. THONET C. DAUPHINE (left), appointed Manager of Sales Development, Hooker Electrochemical Co., Niagara Falls, N.Y., was former Eastern Mgr. of Product Development for Oronite Chem. Co., and Supervising Engineer with California Research Corp. prior to that—both these being Standard Oil of Calif. subsidiaries.

NORMAN H. NUTTALL (right), who has been appointed to position of Manager of Paper Mills Department, Stein, Hall & Co., Inc., New York City, starches and dextrines firm. In new position, he attended Paper Week sessions recently.

NEWTON L. NOURSE (left) was recently appointed General Sales Mgr. and JOHN J. McDONALD (right), Pulp Sales Mgr. of Brown Company, according to Downing P. Brown, Vice President in charge of Sales. Mr. Nourse joined Brown in 1920 from Colby College, organized technical service, and later sales inspection, departments for Berlin and La Tuque mills, aiding in introducing Solka fibers into technical papers and dissolving fields. He was Manager of Pulp Sales since 1933; was with WPB during war. Mr. McDonald, U. of New Hampshire grad, joined Brown's research in 1927, helped develop specialty pulps, and was New York sales representative. After rising to Major in U.S. Army Chemical Warfare, became Asst. Pulp Sales Mgr. in 1945.

THREE NEW INDUSTRIAL MANAGERS have been assigned by Minneapolis-Honeywell Regulator Co. to the field staff of its Brown Instruments Division, it is announced by William H. Steinkamp, field sales manager of the industrial division. Joseph H. Matulis has been named industrial manager of Honeywell's Chicago branch, Willard Smith of the Pittsburgh branch, and Joseph H. Bowman of the Buffalo office.

ARTHUR L. DE SPAIN, formerly project engineer, Brown Co., Berlin, N. H., has joined Chas. T. Main, Inc. of Boston, Mass., as a project engineer in their Pulp and Paper Division. Mr. de Spain is a graduate of Westminster College and has been connected with the pulp and paper industry since 1929 as a chemical and process engineer. He has been with the General American Process Equipment; Geo. F. Hardy, consulting engineer; Bloedel, Stewart & Welch, and Du Pont and the Hanford, Wash., atomic bomb plant.

F. HENRY SAVAGE has been promoted to the newly created position of assistant general sales manager of International Paper Co., announced Richard C. Doane, vice president and general sales manager.

I.P.'s Savage (no relative of the Chillicotte Savages) started with the American Writing Paper Co. and was their New England manager, then joined International April 1, 1921, as a salesman in Boston Office and was later New England manager for I.P.; has been in New York since Jan. 1930, as sales manager of Book & Bond Division.

EDWARD H. ANGIER, dean of waterproofed and spiral wrap papers, passed away at Framingham Centre, Mass., Feb. 6, following several weeks illness. Mr. Angier was chairman and president of the Angier Corp., of Framingham, Mass., founded in 1895 and which, under his direction, developed into one of the outstanding concerns in the country in industrial packaging materials.

NORTON JACKSON has been appointed sales promotion manager of the Cellophane Division, Olin Industries, Inc., New York, following his resignation from St. Regis in that capacity. His duties in the latter company are being assumed by *KENNETH LOZIER*, in charge of sales promotion at St. Regis. Mr. Jackson is widely known in industrial advertising; before joining St. Regis he was with American Can. In Olin his activities will center on the new Olin Cellophane to be made at Pisgah Forest, N.C.

DON. L. TARANTO has joined the sales staff of Bulkley, Dunton & Co.'s Fine Paper Department, it is announced by J. C. *MARVIN*, vice president. Formerly with the Rochester Paper Co., Mr. Taranto has had wide experience in the graphic arts field.

CARROLL S. ANDERSON, who did field layout work on construction of the world's first commercial nylon plant at Seaford, Del., was named today field project manager to supervise the construction of the first plant to manufacture the Du Pont Co.'s "Dacron" polyester fiber, formerly known as Fiber V and "Amilar."

HUGH W. SLOAN, vice president of St. Regis Sales Corp., and former Pacific Coast manager of the company's Multiwall Bag Division, has moved to the New York office. Mr. Sloan will assist Arch Carswell, vice president of the company and general sales manager for the division, in the direction of bag sales. Robin G. Swain, production manager of the company's West Coast bag plants, succeeded Mr. Sloan as Pacific Coast manager.

INSTRUMENT MECHANIC OR INSTRUMENT ENGINEER WANTED

Kraft Pulp Mill, bleached and unbleached, located on B.C. West Coast, has opening for a qualified industrious instrument man with excellent opportunities for advancement. Please state experience, age, status, and salary range expected, first letter. Please reply to P&P Box No. 93, c/o PULP & PAPER, 71 Columbia St., Seattle, Wash.

POWELL RIVER

UNBLEACHED SULPHITE PULP

STRENGTH
COLOR
SERVICE
DEPENDABLE SUPPLY

POWELL RIVER SALES COMPANY LIMITED

— 705 STANDARD BUILDING - VANCOUVER, B.C. —

NEW EVERETT MILL OKAYED

A certificate of necessity has been issued to the Pulp Division of the Weyerhaeuser Timber Co. for a bleached kraft pulp mill to be built in Everett, Wash., as part of the National Production Authority program of encouraging additional production facilities for essential materials. In this case the facilities would add to the supply of explosive pulp.

A certificate of necessity relates only to amortization of investment and gives no assistance in obtaining materials and equipment. The company has not made the decision to proceed with this mill, and further consideration probably depends on whether or not some form of priority assistance in obtaining equipment is made available for projects of this sort.

It has long been well understood in the western industry that the city of Everett, with eight sawmills and two sulfite mills inside its city limits, and many other sawmills in nearby towns, would achieve a more efficient integration of wood resources in the region if a kraft mill were added. However, there is one alkaline pulp and paper mill (soda process) in nearby Lowell-Everett Pulp & Paper Co.

The plan for such a market kraft pulp mill has been discussed by Weyerhaeuser officials and directors.

Weyerhaeuser built a kraft pulp mill at Longview, Wash., which began marketing its product in January 1949. It built a kraft containerboard mill at Springfield, Ore., which went into operation in late 1949, and has been expanded from 150 to 250 tons. It is building another kraft pulp and containerboard mill at Longview to be completed in 1952. So, an Everett kraft mill would be its fourth in a row in recent years.

The government also certified $12,469,377 for the 175-ton kraft bleached containerboard mill being built in Longview. Government certificates permit tax write-offs on the amounts specified, the write-offs reportedly being up to about 74%.

The proposed mill in Everett would be about 250 tons capacity. The $19,125,000 certified is exclusive of land. The location of the mill is undecided. Weyerhaeuser now has a big sawmill on property on the Snohomish River in the north of town, and a sulfite mill on Everett's salt water harbor.

F. A. SODERBERG (left), President of the Commercial Chemical Development Assn., and Manager, Industrial Division, Technical Department, General Dyestuff Corp., presents the 1951 CCDA Honor Award to F. J. Curtis, Vice President, Monsanto Chemical Co. The presentation climaxed all-day meeting of Association at Hotel Roosevelt, New York, March 21, and was given to Mr. Curtis "in recognition of outstanding service to chemical industry."

Fast Work by New Barker

A Russian-jeep mounted portable woods barker, developed by S. M. Adams, an International Paper Co. pulpwood dealer, of Plateau, Alabama, and James R. Clark, of Mobile, Ala., formerly of Rite Equipment Co., can debark an average barker load of 64 sticks (¾ths of a cord) of green longleaf pine in 1½ to 4 minutes. In a previous issue, a typographical error showed this as 40 min.

Sonoco Plant To Be in Mexico

Plans for erection of a paper mill and converting plant in Mexico have been completed, according to James L. Coker, president, Sonoco Products Co., Hartsville, S.C. The company has acquired five acres of land near the village of Santa Clara, about ten miles from Mexico City, on the Pan American Highway from Laredo, Texas, and main line railroad between Mexico City and Vera Cruz.

Erection of a paper machine will be started June 1.

Bob Heuer, Veteran Superintendent, Dies

Harland Robert Heuer, who had the unique honor of having been chairman of two different divisions of the Superintendents Association — of the N.Y.-Canadian Division in 1927 and the Pacific Coast Division in 1933-34—died in a Longview, Wash., hospital on March 2 after a long illness. He was 58.

He had been with Weyerhaeuser in Longview since 1931 and was a sulfite shift superintendent. Prior to that, other companies he was with included: Hawley at Oregon City, Brown Co., Nekoosa-Edwards Paper Co. and C. D. Jenssen & Co.

In 1934 he was convention chairman for the first national convention of TAPPI ever held on the Pacific Coast, in Portland, Ore. His son, John (Pete) Heuer is assistant to the president, A.W.P. Co., Albany, N. Y. His widow and three other sons and two daughters survive.

Expansion Plans at Westminster

A $2,000,000 expansion and modernization program was announced last month for Westminster Paper Co., Ltd., New Westminster, B.C., by President E. M. Herb, and now Mill Manager John Ashby has outlined to PULP & PAPER the major steps to be taken.

Purchase of a new high speed paper machine for facial tissue and dry crepe grades from Beloit Iron Works is a major item. It will operate at 2500 f.p.m., compared with 1200 f.p.m. in the Beloit installed in 1922 and rebuilt in 1941, and 1500 f.p.m. in the Beloit machine added in 1947.

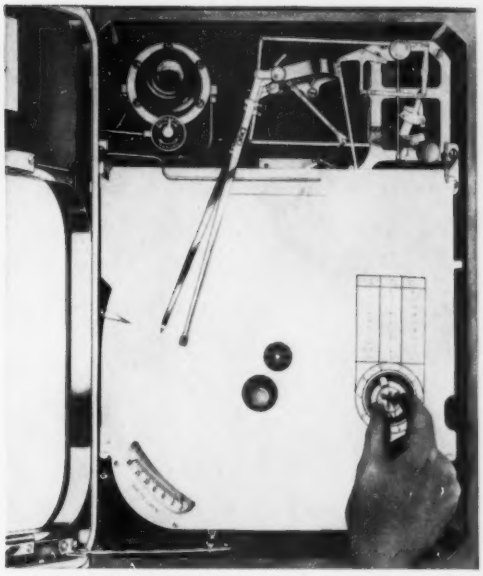
The new machine is expected to add 40 to 45 tons a day by early 1952, bringing total daily production to about 37,000 tons a year, compared with 22,000 tons at present.

Westminster does not plan any further diversification of its production, the sole aim is for greater tonnage. New construction embraces extension of machine room and converting plant.

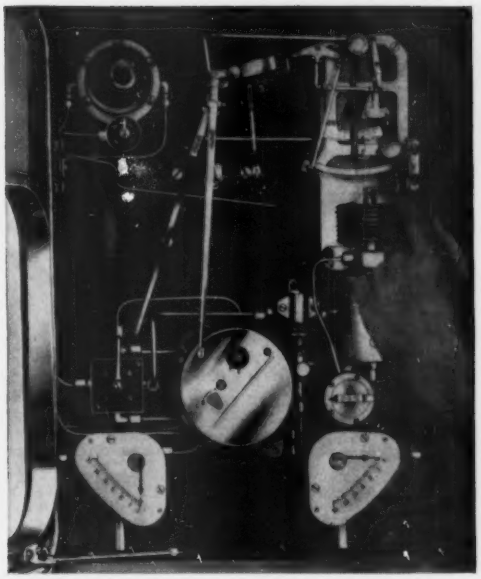
The new Foster Wheeler 625 h.p. steam plant, put in operation in 1947, was in anticipation of the third machine.

Officers and Directors of Howe Sound Pulp Co.

L. L. G. Bentley has been elected president of the newly organized Howe Sound Pulp Co., whose unbleached kraft pulp mill at Port Mellon, B.C., will soon be in production. John G. Prentice, who with Mr. Bentley is a top executive of Canadian Forest Products, Ltd., Vancouver, B.C., majority owner of the new company, is vice president. The directors are William McMahan, Russell Mills and H. V. Whittall, representing Canadian Forest Products; D. G. Driscoll and J. A. Aull, Jr., representing the Sorg Pulp Co., Middletown, O.; S. G. Blankenship and Avery Seiler, Perkins-Goodwin Co., New York; C. M. Edward, of Canadian Forest Products, is secretary.



EASIEST TO PUT INTO OPERATION—Calibrated control actions save hours of shutdown. Reset, derivative and proportional values can be exactly reproduced at any time on the same or any other Series 500 controller . . . merely by duplicating the setting. Thus: controller adjustments can be standardized for any process throughout a plant or national organization.



EASIEST TO SERVICE—Inherently simple design, using the fewest possible parts, plus extremely close-tolerance manufacturing . . . make the instrument thoroughly interchangeable, trouble-free and a cinch to service. For example: only one simple adjustment puts the system in exact calibration even after complete disassembly and reassembly.

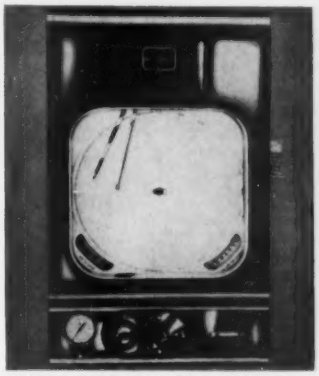
ONLY BRISTOL SERIES 500 CONTROLLERS GIVE YOU THIS EASE OF OPERATION

When you wish to reproduce a previous control action or duplicate one taking place at some other point, the Bristol Series 500 Air-Operated Controller permits you to do it merely by setting a dial.

Or, should the instrument require servicing, only one simple adjustment is needed to calibrate the control system and put it back in operation. Almost anyone can service this instrument.

Furthermore, users report that the Bristol Series 500 Controller requires practically no maintenance.

This outstanding instrument—a product of 60 years of experience—is completely described in Bulletin A120. THE BRISTOL COMPANY, 142 Bristol Road, Waterbury 20, Conn.



BRISTOL SERIES 500 CONTROLLERS are offered in five types—on-off, proportional, reset, derivative, reset plus derivative—to control temperature, flow, pressure, liquid level, humidity, pH. Conversion from one type to another can be made by the user. Model shown has external-manual station with mechanical interlock for test and service.

THE DEPENDABLE GUIDEPOST OF INDUSTRY

BRISTOL

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS

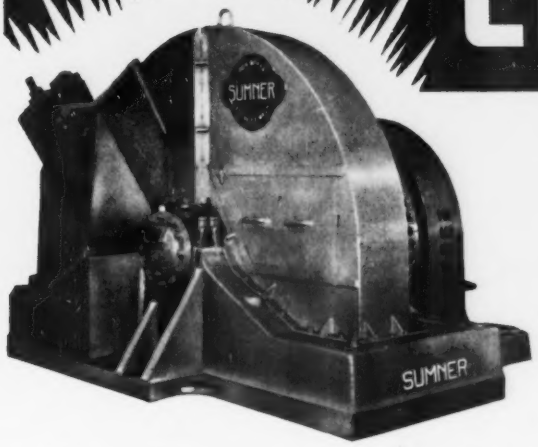
INTEGRITY - QUALITY - SERVICE
LOUIS ALLIS
1901
1951
ELECTRIC MOTORS
OUR 50TH YEAR
FOR HALF A CENTURY—
SPECIALISTS IN THE DESIGN,
MANUFACTURE AND APPLI-
CATION OF INDUSTRIAL
ELECTRIC MOTORS
In the March of Electric Motor Progress—we have lead the way in many developments of far-reaching importance to Industry. For half a century, we have created, pioneered, and built specially designed electric motors for the exacting requirements of this country's outstanding machinery manufacturers.
No matter what your motor requirements are—whether special or standard—you can depend upon Louis Allis.
THE LOUIS ALLIS CO.
MILWAUKEE 7 WISCONSIN
50th YEAR
1901-1951

SAWMILL WASTE CAN BE CONVERTED INTO CHIPS

with the **SUMNER**

72" 8-KNIFE

CHIPPER



If you are interested in adding to your chip supply and, at the same time, save your own or your log supplier's standing timber to be cut in future years instead of now, it will pay you to investigate the possibility of converting applicable sawmill waste—within an economical transportation radius of your plant—into chips. Alert sawmill managers immediately recognize the long term value in converting their mill waste into a by-product which will produce a consistent and sizeable income for their mills.

In one Pacific Coast sawmill, a SUMNER 72", 8-Knife Chipper daily produces approximately 150 units (30,000 cu. ft.) of chips from clean edgings and trimmings for pulp mill use. This sawmill's customer reports that this chip source, besides being a consistent producer, furnishes the best chips that they are buying from any of their outside suppliers.

This is the production record from only one mill and there are EIGHTEEN other SUMNER 72", 8-Knife Chippers now or about to be in operation.* There are also other SUMNER 72" Chippers, with 4 and 6 Knives, in everyday use.

The sum total of the units produced daily by these 72" Chippers, only one in the series of Chipper sizes ranging from a 36" disc-diameter Re-Chipper up to the 175" Chipper—the world's largest—built by SUMNER, runs into astronomical figures.

SUMNER has a Chipper to meet every chipping requirement and information will be gladly furnished on request.

INSTALLATIONS

*Blagen Mill Company	Hoquiam, Wash.
*Fibreboard Products Inc.	Arcata, Cal.
Longview Fibre Co.	Longview, Wash.
*St. Paul & Tacoma Lbr. Co.	Tacoma, Wash.
St. Regis Paper Co.	Tacoma, Wash.
*Weyerhaeuser Tbr. Co.	Snoqualmie Falls, Wash.
*Weyerhaeuser Tbr. Co. (2)	Enumclaw, Wash.
Weyerhaeuser Tbr. Co. (Pulp Div.)	Everett, Wash.
Weyerhaeuser Tbr. Co. (Lbr. Div.)	Everett, Wash.
*Weyerhaeuser Tbr. Co. (Lbr. Div.)	Everett, Wash.
Weyerhaeuser Tbr. Co.	North Bend, Ore.
*Weyerhaeuser Tbr. Co.	North Bend, Ore.
Weyerhaeuser Tbr. Co. (Pulp Div.)	Longview, Wash.
*Weyerhaeuser Tbr. Co. (Lbr. Div. 2)	Longview, Wash.
Weyerhaeuser Tbr. Co. (Lbr. Div.)	Springfield, Ore.
Weyerhaeuser Tbr. Co. (Pulp Div.)	Springfield, Ore.
Wood Conversion Co.	Cloquet, Minn.

*To be installed in 1951

SUMNER IRON WORKS

Since 1892

EVERETT, WASHINGTON

In Canada: CANADIAN SUMNER IRON WORKS LTD., VANCOUVER, B. C.

EXPORT DEPARTMENT FRAZAR & HANSEN LTD.

301 Clay Street, San Francisco 11, California, U. S. A.

FIBREBOARD PROGRAM

EFFICIENCY IS ALSO GOAL

T. N. BLAND, President of Fibreboard Products Inc., headquarters in San Francisco.

PROMINENT OFFICIALS OF FIBREBOARD PRODUCTS INC. (l. to r.): E. J. FARINA, Vice President in charge of Sales; R. B. KNOTT, Vice President in charge of Finance; ROBERT E. BUNDY, Vice President in charge of Production; N. E. SANFORD, General Production Manager.

Fibreboard Products, Inc., largest West Coast producer of boxboard, shipping containers, and cartons, and one of the four largest in the U.S., will spend over $5,000,000 during this fiscal year on a plant development, modernization, and an improvement program embracing nearly every phase of the company's activities.

Results of the program, to be completed probably in 1952, will be greatly increased plant efficiency, more plant capacity in some instances, and consequent stepping up of production and quality level throughout the corporation's plants in the West. Subsidiary companies will also benefit, notably Glass Containers, Inc.; Federal Container Co., Maryland Container Co., and Precision Electrotype Company.

Antioch Division

At Antioch Division over $2,000,000 will be spent on new structures and equipment modernization. Included will be a new 142,000 sq. ft. warehouse and shipping building and equipment for the No. 2 Machine covers 3 Shartle No. 2-A Miami Jordans, four 250 hp Electric Machinery motor drives, Downingtown suction drum roll, 250 hp Westinghouse turbine drive, and new slitters of Fibreboard's own design. The No. 3 board machine will be completely rebuilt.

On the filler system a 20-ft. Shartle-Dilts continuous Hydrapulper, powered with a 200 hp Allis-Chalmers motor, complete with Shartle ragger and junker will be installed, as well as three Shartle Hydraclones for stock cleaning. These will replace the old type flume and sedimentation system.

The liner system at Antioch mill will consist of a 14-ft. batch Shartle-Dilts Hydrapulper (150 hp motor), an Emerson Magnetic separator, then the material is cycled through a No. 4 Shartle Hydrafiner with a 250 hp electric machinery motor. Four Shartle No. 2A Miami jordans, powered with 250 hp electric machinery synchronous motors, are being installed, and stock pumps are HMS Shartle Bros.

Modern carton manufacturing equipment consisting of food pail machinery, third color printing attachment, high speed printing and cutting press and two high speed gluers have also been added to the carton plant, to step up volume of frozen food, bakery, and many other styles of folding cartons. In the corrugating plant, improvements include additional taping equipment and a new partition assembler.

San Joaquin Division

At the San Joaquin Division over half at million dollars is being expended on additions and improvements to the giant pulp mill and converting plant, near Antioch, Calif., which started operations last year.

A new converting plant will manufacture Ex-Cell-O paperboard milk container blanks with unique "gable" top.

To further reduce plant odors, a new horizontal flow Cottrell Precipitator, furnished by the Western Precipitation Corp., is being hooked up with the present vertical precipitator.

A new kraft digester is being furnished by Consolidated Western Steel Corp., and two additional refiners are E. D. Jones & Sons Fibremasters, powered with 150 hp Allis-Chalmers electric motors.

The new Consolidated-Western Steel Corp. digester is 11 ft., 6 in. in dia., and 30 ft., 6 in. high. It is constructed of ASTM A212 mild, high tensile strength steel, and is unlined. The top head is $1\frac{1}{4}$ in. thick, the shell is $1\frac{3}{8}$ in. thick, and the cone bottom is $1\frac{1}{2}$ in. thick.

Sumner Division

Well over a half-million dollars is being spent on plant additions and modernization in the Sumner, Wash., Division. A new steel, concrete, and iron siding building of 34,500 sq. ft. is being erected to house additional corrugating equipment, including stitching, taping, slotting, and printing machinery to increase output an estimated 200%. This corrugating equipment is the most modern high speed Langston unit. It is an 85" corrugator.

Complete modernization of mill stock refining is in progress at Sumner. On the filler system is an addition of a No. 3 Junior Emerson refiner, and on the liner system there is a 10-ft. Shartle batch Hydrapulper, and a Shartle 8-in. HMS pump, hooked up with an Emerson No. 3 Jr. refiner, and a magnetic separator. The Hydrapulper is powered with a 100 hp motor and the refiners with 150 hp motors.

Power plant facilities are being enlarged to take care of the additional load burden with the installation of a Babcock & Wilcox shop-assembled "package" type boiler of 18,400 lbs. steam per hr. capacity, oil fired with Babcock & Wilcox steam atomizing oil burners. The boiler is designed to operate at 185 lbs. pressure, and is fitted with Copes feed water regulator. It was installed by C. C. Moore & Co., Engineers, San Francisco, and in connection with the Babcock & Wilcox boiler is a Cochrane pressure type oil removal filter of 4800 gph capacity. It is 4 ft,. 6 in. in dia., and like the boiler, was provided by C. C. Moore & Co. Engineers.

This added power will be used for the new Langston corrugator, and for heating the added building space. Two DeLaval 140 gpm boiler feed pumps have been installed also—one motor-driven, and the other turbine-driven.

Vernon Division

Plant additions, modernization and new equipment in the Vernon, Los Angeles, Division, are being carried forward to the extent of some half-million dollars. The principal addition to this Fibreboard plant will be a new two-story reinforced concrete building of 20,000 sq. ft., now in process of erection. A new third color rotary press, two cutting presses, and a high speed gluer are included in the program. The No. 1 and No. 2 board machines are also being modernized to increase boxboard production at this division.

Port Angeles Division

At the Port Angeles, Wash., Division, new stock preparation equipment and

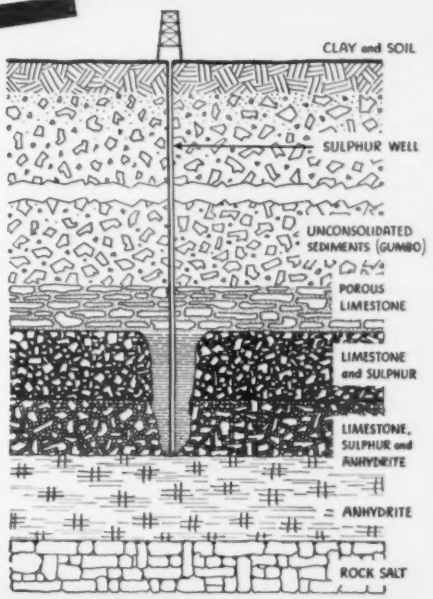
SULPHUR

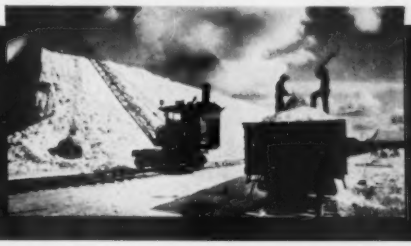
*Interesting Facts Concerning This Basic Raw Material from the Gulf Coast Region

*DEPOSITS . . .

Practically all of the elemental sulphur used in this country comes from mines in Louisiana and Texas.

There, the sulphur deposits occur in the cap rock overlying certain salt domes. The sulphur is mined at depths of 300 to 2,000 feet below the surface. It is melted in place by pumping into the deposit water heated under pressure to a temperature above the melting point of sulphur. The melted sulphur flows away from the limestone and is pumped to the surface where it is allowed to solidify in vats. By such means sulphur nearly 100% pure is produced.





Loading operations at our Newgulf, Texas mine

TEXAS GULF SULPHUR CO. INC.

75 East 45th St. New York 17, N. Y.

Mines: Newgulf and Moss Bluff, Texas

modernization are in progress amounting to a quarter of a million dollars. This includes an additional pulp machine which will result in increasing output by 3600 tons per year.

Stock at Port Angeles will go through a 12-ft. Dowingtown Fibrepulper, powered with a motor of 150 horsepower. After this treatment the stock goes to a Morden Stock-Maker set up so that it can also refine stock directly from the sulfite pulp mill. The Morden Stock-Maker will be powered with a 200 hp motor.

This is thought to be the first installation of a Downingtown Fibrepulper on the West Coast. It has a lobed design, which is said to produce good vortex and each lobe develops its own stream of stock feeding back to the impeller. A sketch of the tube and impeller design is reproduced herewith.

Uniform mixing, fast disintegration, large tonnage for small unit, and capability of taking large diameter impeller are some of the advantages cited for the machine.

At Port Angeles a new sixth cylinder vat by Black-Clawson is being added to step up output of all types of boxboard, coated grades, tag boards and wall boards. Before this Black-Clawson vat is a Shartle Bros. Selectifier screen.

A new General Electric 200 hp steam turbine direct drive is being installed for the No. 1 machine, a 102-in. trim Downingtown, and being installed on this machine is a new Downingtown suction drum press, and over the machine is a new J. O. Ross Engineering Corp. hood and ventilation system. A Midwest-Fulton dryer drainage system has been installed for the same machine. On the machine drive-in stands are being replaced and 18 Downingtown 150-lb. psi dryers will be installed.

Stockton Division

A substantial sum is being expended in Fibreboard's Stockton Division for modernization and additional equipment. New printing and milk bottle gluing machinery is being installed in the carton plant; an E. D. Jones & Sons standard jordan also has been added to the mill stock preparation equipment.

This jordan is to be driven by a 250 hp General Electric motor.

A printer-slotter, stitching and taping machinery are also being installed in the corrugating department. A third color attachment has also been added to the printing press enabling the plant to turn out third color printing of cartons in one operation.

Other Divisions

New gluing and waxing equipment is being installed in the Portland, Ore., Division in order to process more efficiently frozen food boxes as well as several new types of cartons for general use.

In the South Gate, Los Angeles, Division, modernization of converting equipment is going forward, including new taping and stitching equipment.

The Federal Container Co., Philadelphia, will put in a new corrugating taper and a new folder stitcher.

The Maryland Container Co., Baltimore, will add a new gluer, wax coating machine and stitching machine to its present equipment to speed up efficiency and plant output.

Last, but by no means least in the extensive list of allocations, will be the $100,000 to be expended by Fibreboard for new laboratory equipment in the central Research Division at Antioch. This new testing apparatus will enable the corporation to maintain even more exacting control over the products of their plants, and assist in the development of new or improved materials and processing in the manufacture of boxboard packaging materials.

Design of Fibrepulper

This drawing shows the design of the new Downingtown Mfg. Co. Fibrepulper which has been installed in Port Angeles, Wash., mill of Fibreboard Products Inc., for stock preparation of sulfite pulp. It has a lobed design, which is said to produce good vortex and each lobe develops its own stream of stock feeding back to impeller. The tub and impeller design machine is outlined at left.

Uniform mixing, fast disintegration, large tonnage for small unit, and capability of taking large diameter impeller are among advantages cited.

Expansion at Los Angeles

J. D. Zellerbach (*left*) president, Crown Zellerbach Corp., is shown presenting a 35-year service pin to Vincent Lacasella, employe of the Crown Willamette division, Los Angeles, Mar. 31.

Presiding was Lester E. Remmers, resident manager; toastmaster was William D. Welsh, director of public relations, and speakers included J. R. Baruh, and Roy Young, vice presidents.

Mr. Baruh announced the building this year of a converting plant, warehouse and general offices on Garfield ave., Los Angeles, which will be twice the size of the present plant on East 12th. Mr. Zellerbach's address dwelt with his two years as administrator in Italy under the Marshall Plan. Thirty-eight pins were awarded.

Australian Machine

The big new 246 inch paper machine manufactured by Dominion Engineering Co., Lachine, Que., for Australian Newsprint Mills Co. is now in production. It was designed to produce 50,000 tons of newsprint annually.

ESA PAPERBOARD CHIEF

N. M. BRISBOIS, of San Francisco, Vice President of Fibreboard Products Inc., who is now in Washington, D.C., serving as head of the Paperboard and Board Products Section of the Economic Stabilization Authority.

F. P. THORNTON, JR., (left), of Summit, N.J., is the new President of W. E. Greene Corp., Woolworth Tower, New York, as the result of a recent meeting which also elected W. E. GREENE, (right), Chairman of the Board. Other officers are: E. S. Greene, Vice President; C. M. Schermerhorn, Vice President; and R. P. Arnold, Secretary.

ROBERT H. GOETZMAN (left), who heads sales of glassine and greaseproof papers off the machines at Thilmany Pulp & Paper Co., was honored by the Junior Chamber of Kaukauna, Wis., being elected its "Man of the Year" for outstanding work in his company and community. He started with Thilmany on the rewinders in 1933. He and his wife, the former LaVerne Kramer, have four children under 10. F. S. MORGAN (right), whose appointment to the newly created position of Plant Engineer at St. Helens Pulp & Paper Co., St. Helens, Ore., was announced here in a recent issue. He had been head of the department of engineering for a year.

P. M. & A. of California

"Rosin Sizing" was the subject of a talk Mar. 15 to the Paper Makers & Associates of Southern California by L. E. "Pete" Anderson, mgr., naval stores dept., Hercules Powder Co., Oakland, Calif. With Mr. Anderson from the same concern were, Milton J. Macguire, Portland, Ore., and Harry Kolb, San Francisco.

Claude Sharp, Los Angeles Paper Box Co., chairman, conducted the meeting. He was assisted by Joe T. Cooey, Angelus Paper Box Co., secy. W. T. Birdsey, Pioneer Flintkote Co., announced the annual contest for the Geo. M. Cunningham Award on papers relative to paper-making problems, would be held at the May meeting.

HOW MUCH SODA ASH CAN YOU *Economically* RECOVER?

UNIQUE ADVANTAGES OF BUELL 'SF' ELECTRIC PRECIPITATOR COUPLES PEAK EFFICIENCY WITH PEAK ECONOMY IN SODA ASH COLLECTION!

In the recovery of valuable soda ash, as in the recovery of any valuable dust, a line must be drawn between the limits of peak efficiency and practical economy.

For, as you know, there is a degree of efficiency, beyond which, recovery becomes economically unsound.

The Buell 'SF' Electric Precipitator was designed with this premise in mind. Its specific operating advantages permit higher soda ash recovery efficiencies than those of ordinary collecting devices.

Only Buell Incorporates these Efficiency-Building Advantages

- StediFLOW Dust Fall assured through carefully timed, continuous-cycle rapping of plates in line.
- Exclusive self-tensioned Spiralectrodes for greater corona emission without danger of flash-over.

A Buell engineer can show you how to economically increase your soda ash collection (wet or dry) efficiency with the Buell 'SF' Electric Precipitator. He will be glad to discuss your problem with you.

Write today for detailed information, or ask for the Buell catalog.

Buell Engineering Company, 70 Pine Street, Suite 5027, New York 5, N. Y.

ELECTRIC CYCLONIC

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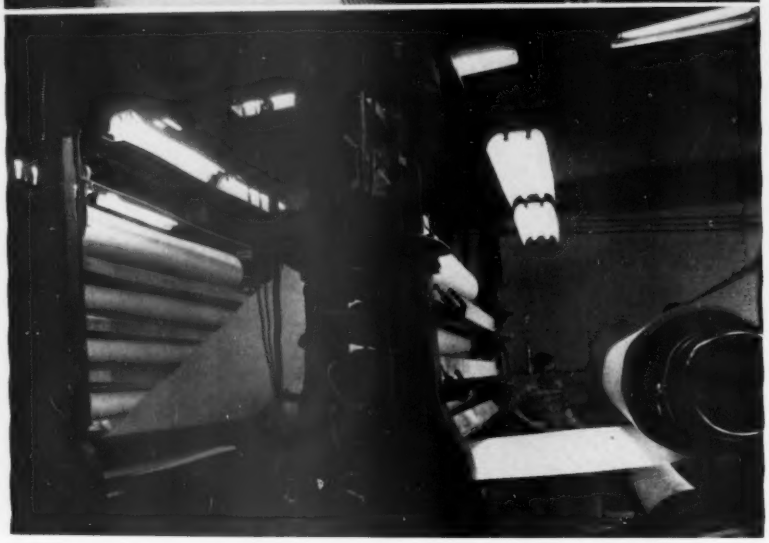
Engineered Efficiency in **Dust Recovery**

IMPORTANCE OF GOOD LIGHTING

Fairfield and Fitchburg Mills are Examples



INTERESTING PHOTOS showing good lighting in Fairfield Paper & Container Corp., Baltimore, Ohio (top) and Fitchburg Paper Co., Fitchburg, Mass. (below). The top picture shows lights under the hood of a paper machine at the Baltimore mill and also angle floodlights on the wall. The view below shows how supplemental fluorescent units are employed over calenders at the Fitchburg mill. This is at dry end of a machine.

Fitchburg and Fairfield Mills Provide Photos

George R. Wallace is president and James Fish is plant manager of the Fitchburg Paper Co., Fitchburg, Mass., and M. D. Custor is president, H. L. Custer is vice president and general manager, and James Stinson is mill superintendent of the Fairfield Paper & Container Corp., Fairfield, O., the two companies which kindly provided the photographs published with this article showing excellent lighting in their mills.

Fitchburg operates 5 Fourdrinier machines, making 150 tons daily of fine and book papers, coating, litho, ledger, sufite food wrap and embossed and printed specialties. The Ohio mill makes 175 tons daily of chip, combination board and lightweight board specialties on two cylinder machines.

BY E. A. LINDSAY

Industrial Lighting Specialist, General Electric Co., Nela Park, Cleveland, O.

(Excerpts from paper given before Joint Supts. —TAPPI Meeting, Middletown, O., Oct. 10, 1950)

Productivity increases as illumination increases—rapidly at lower levels and at a reduced rate for very high levels. For most tasks a lighting level is reached where there will be very little additional increase in output. This often indicates a limit of manual dexterity, rate of understanding, etc., rather than lack of improvement in seeing. It is still desirable to improve the seeing condition beyond this point. If the worker can perform his task with less effort, he can carry out his duties with greater safety and accuracy and with less strain, nervousness, and fatigue.

For the general manufacturing processes the lighting system should not only give a good distribution of light over the area, but shadows should not be pronounced. These requirements are, in most cases, best met today by lighting systems employing fluorescent lamps where the mounting heights do not exceed approximately 25 feet. They combine high efficiency with low brightness (for eye comfort) and good color rendition. The lighting recommendations usually warranted for areas of this type are in the 40-50 footcandle range and usually utilize 2-lamp fluorescent equipment. The standard cool white lamps are usually used except in the critical color discrimination area.

In relatively high bays (above approximately 25 feet) filament or mercury lamps, or combination of filament and mercury, are often best adapted. They are preferred over fluorescent because of reduced maintenance costs even though the system is somewhat less efficient. The illumination level should usually be in the 40-50 footcandle range.

One of the aspects which may influence the choice of a particular light source for a general lighting system is reflected glare. For example, the use of high brightness sources such as mercury or filament lamps in the calendering areas is usually undesirable due to the high brightness specular reflections from the polished surfaces of the rolls.

Typical of other lighting requirements in paper manufacturing plants are the chipper and barker areas where filament and/or mercury systems are particularly suitable. As much of the work in these areas is performed by nearly automatic machines, the seeing tasks are often intermittent and a lighting level of approximately 30 footcandles is in order.

It is particularly important that the paper making machines be properly lighted. On some parts of the machines it is difficult to supply adequate illumination because of the severe operating conditions. There may be a considerable amount of flying water and pulp which constitutes a severe maintenance problem if the lighting equipment is mounted close to the machine. It is usually necessary to mount the equipment in this position because of the mechanics of machine construction, therefore, anything that can be done to provide better illumination and less maintenance difficulty is highly desirable.

The photograph (on this page) taken under the hood shows the lighting supplied to the upper part of the machine by the under-the-hood illumination. The lighting consists of 100-watt lamps in vapor-proof equipment mounted on 5-foot centers to supply adequate illumination on this portion of the machine. For the more difficult seeing tasks on the lower part of the machine, angle floodlights are mounted along the building wall. 750-watt incandescent lamps are used in these reflectors which are spaced on 9-foot centers. This picture was taken at Fairfield Paper & Container Co. in Ohio.

The general lighting in the calendering area (shown in Fitchburg Paper Co. photograph) should provide adequate illumination for the

Tomorrow's pulp and paper depend on TODAY'S trees

IT TOOK A HUNDRED YEARS TO GROW TREES LIKE THIS

BUT IN THREE YEARS THE BUDWORM CAN MAKE THEM LOOK LIKE THIS

THE SPRUCE BUDWORM UPSET THE "BALANCE"

Insects, birds, animals, trees . . . usually they and other elements "balance", perpetuating our existence. The budworm destroyed this balance, and there are over 2,267,000 acres of budworm-infested timberland in Washington and Oregon alone.

In 1949 control measures started to re-establish the lost "balance", and if these measures are properly extended we can hope to prevent the destruction of billions of board feet of priceless timber. Pennsalt is glad to ally its chemical facilities with other interests, as well as state and federal authorities, in this fight to conserve our natural resources. Support from every quarter will be helpful, for the battle may be a long one.

In the West:
Pennsylvania Salt Manufacturing Company of Washington . . . Tacoma, Washington; Portland, Oregon; Berkeley and Los Angeles, California.

In the East:
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Liquid Chlorine • Caustic Soda • Bleaching Powder • Potassium Chlorate • Sodium Chlorate • Anhydrous Ammonia • Perchlorons • Sodium Arsenite • Sodium Hypochlorite — DDT • Penco forest spray • Weed Killers

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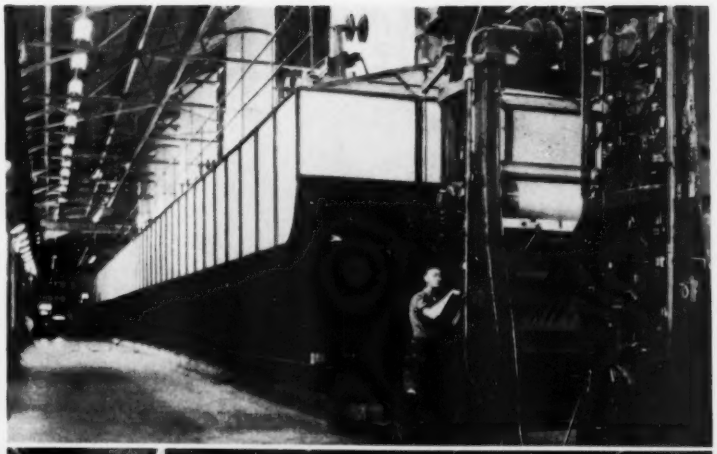
chemicals
Progressive Chemistry for over a Century

VIEWS AT FAIRFIELD PAPER & CONTAINER CORP., Baltimore, Ohio, which makes board specialties on two cylinder machines. The top picture is another view of excellent general lighting system for a paper machine. Below shows Fairfield's lighting over broke-dumping holes—lighting level of about 10 footcandles is supplied by 2 lamps 40-watt fluorescent units on 10 ft. centers.



safe and efficient handling of the heavy paper rolls and for the adjustment and service of the calendering machines. Lighting levels in the 50-footcandle range are desirable for efficient operation. The fluorescent type of equipment is most suitable because of the relatively low brightness reflections from the polished rolls and the machine surfaces. The wide distribution of most industrial fluorescent fixtures provide good vertical illumination on the calender.

In many plants, particularly during the summer months, the problem of eliminating spots on the finished paper produced by insects being trapped in the manufacturing operation, particularly at the calenders, is a difficult one. Some plants have installed yellow lamps in an effort to eliminate this insect problem because most nocturnal insects are sensitive only to blue light. The use of yellow lamps which produce no blue light does tend to minimize the problem. However, the only complete solution to the insect problem is to make the building completely insect-proof by means of fine mesh screens or complete air conditioning.

Modern digester rooms are very similar to control rooms in power plants, etc., and require careful consideration of the lighting installation in order that adequate illumination be provided on the scales, dials and controls. Considerable care should be exercised in order to prevent excessive reflections in the glass meter faces.

Color Matching

The most accurate representation of color is provided by a light source which does not emphasize or subdue any portion of the spectrum. In other words, a source which has equal amounts of radiation in all colors or portions of the spectrum would be preferred. The recently announced *de luxe cool white* lamps approach this optimum much closer than other light sources and are, therefore, the best lamps available today for viewing of colored materials. The new *de luxe cool white* fluorescent lamp is also well adapted to operations where color discrimination, rather than accurate matching is desired. If, however, it is necessary to match two samples it is then desirable to deliberately distort the appearance of the two samples first by lighting them with a source predominantly blue in spectral composition and then lighting them with a source which is predominantly red in spectral composition. If a color match is obtained under these two sources then the samples will match under any other lighting condition.

Summary

Good plant lighting can no longer be considered as a luxury nor as just a necessary overhead item. It can and should be considered as an investment in efficient and economical operation. Modern successful concerns insist on the best in tools, business machines and labor. It is equally important that they insist on the best in lighting installations; lighting designed to be adequate in quantity, of such a quality that it will be comfortable for the workers' eyes and will do its part in creating a pleasant, efficient working environment.

AT FITCHBURG PAPER CO., are these two small paper machines without hoods. Lighting system is carefully engineered to give unusual visibility. This mill has three 90-in., one 110-in. and one 156-in. Fourdriniers.

Cowan Elected Executive Vice Pres. of West Va. P. & P.

John D. Cowan (shown in picture), who started as a chemist with West Virginia Pulp & Paper Co. in 1929, was elected executive president of the company by the board of directors, meeting in New York.

Mr. Cowan was advanced to a vice presidency just shortly over a year ago. In his early 40's, he has had broad experience with the company, serving in varied capacities during the past two decades. Mr. Cowan was re-elected a director, as were David L. Luke, Jr., president; William J. Bailey, Charles A. Cass, Fred A. Coe, Henry F. Harrison, D. Luke Hopkins, William G. Luke, Joseph P. Ripley, Joseph M. Wafer and Richard H. West. Two new directors elected are James R. Shea and L. Frank Thompson, respectively resident managers at Tyrone, Pa., and Charleston, S.C.

Portability Plus!

with this New Skidding Unit!

Here's the most versatile skidding unit you've ever seen . . . an Oliver Industrial Wheel Tractor and the revolutionary new Heller Winch. The winch, a double drum type, is installed between the tractor tires and transmission case. It is virtually a built-in unit that does not affect tractor balance.

Drums are operated by the tractor engine and can be engaged or disengaged at will. By using the tractor engine, clutch and transmission to drive the drums, 12 forward speeds and 4 reverse speeds are obtained. Line speeds can be varied from 38 to 928 feet per minute with line pulls up to 36,000 pounds with a bare drum. Drums can be operated together or independently of each other. This versatility makes possible a wide variety of log skidding, tree or stump pulling work. The tractor can be easily moved from one location to another under its own power. No strains are transmitted to the tractor.

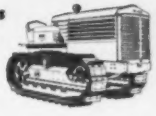
This new unit is equally efficient for ground or high lead skidding. In high lead work, the operator can cushion the haul-in line by simply controlling the brake pressure on the dead side of the differential.

If you're interested in cutting logging costs, it will pay you to investigate the Oliver Tractor-Heller Winch combination. For details, see your Oliver Industrial Distributor or write The OLIVER Corporation, 19300 Euclid Avenue, Cleveland 17, Ohio.

THE OLIVER CORPORATION

A complete line of industrial wheel and crawler tractors

"FINEST IN INDUSTRIAL MACHINERY"



The Sign of Extra Service

All across the North American continent, north to south and east to west, the industry is improving woodlands technics and introducing large scale conservation, reforestation and mechanization.

HOW SOUTHERN KRAFT DOES IT

PART III

The Mobile Division, which governs International Paper Co. fee lands in Alabama and southeast Mississippi, embraces many a well stocked, fast growing acre of timber; and its management includes tree harvesting at all phases of growth. Of 175,000 acres in Alabama and 117,000 in Mississippi within the jurisdiction, 85% or more is in pure pine stands with 50 to 60% fully stocked. Little company lands are in the major hardwood river bottoms. Hardwood intrusion is not an acute problem.

The division chief, Felix Dowdy, has his office at P. I.'s Southern Kraft Division headquarters building in Mobile.

In 1949 the Mobile Division removed an average of 30 to 100 cords per acre from the total acreage, including what went into sawlogs, hardwood, pulpwood, etc. All timber is marked for cutting which is performed by practical men of long woods experience. All woodlands are included in an improvement program. Cutting is of the intermediate type for partial removal intended to keep the woods vigorous and headed for even aged stands. In a substantial part of acreage the land is stocked to 75% of capacity and above.

FELIX DOWDY, Division Chief of Mobile Division of International Paper's Southern Woodlands. His offices are in I.P. Southern Kraft Headquarters Building at Mobile, Ala. He is on left; on right: ARDIE D. TOLER, Wood Procurement Superintendent at the Mobile, Ala., Mill of International.

The Mobile division was set up in 1945. Prior to that time not much was done except to control fire and acquire forest land.

Where acreage has demonstrated inability to restock naturally, pine seedlings are planted, three machines being used for that purpose. If seedlings are available, about 1200 acres are planted annually. Most spacing is 8x8 feet but is variable with soil quality.

In areas having less than 30% stocking, the policy is to either have a seed tree cutting, or else cut clean and replant.

As a part of the management program, the timber stands have been assigned identification numbers and described as to species, age, density, volume, cutting recommendations, etc. The stand description work was started in early 1948, those locations with immediate cutting problems being handled first. As the stand descriptions were set up, the cutting budgets were prepared, reducing later field work.

Initially the division possessed Triple-A aerial maps but these provided only partial coverage as they related primarily to farmed land. The entire area eventually, will be covered by aerial maps.

Public roads are adequate for company personnel and equipment to reach all presently owned fee lands, so not much is required in major road building. Of course, there will be a certain amount of maintenance where trails thin out into out-of-the-way places.

Bay Minette District

Earliest French settlements along the Gulf of Mexico began at Mobile and the Spanish site at Pensacola to the eastward is likewise of ancient vintage. Between the two, running northward there extends an area of well traversed high land. Here, with headquarters at Bay Minette, Ala., with Edward "Mac" Aylin in charge, is one of the three division's districts. Most of the district lands are in Baldwin county and contain substantial acreage in large blocks. Much of this land has been held in fee for a 20-year period.

Under state law, hunters in Alabama must have a written permission in their possession when hunting on another owner's land whether "posted" or not. A policy of granting hunting leases to local community hunting clubs has served to popularize the company, and such memberships have worked to reduce fires and control trespass. The company keeps some land open (unleased) to preserve a hunting place for men not belonging to hunting

(Continued on Page 75)

SOUTHERN KRAFT'S STORY — TOLD HERE FOR FIRST TIME

Here is the third of a series of unusual articles written by our Southern Associate Editor for PULP & PAPER readers, describing the forest production policies and methods of International Paper Co., Southern Kraft Division.

This marks the first time that the important story has been told of how this largest paper company on the continent, and dominant producer in the South, is supplying its nine big kraft mills from Springhill, La., and Camden, Ark., to Georgetown, S.C., with 3,500,000 cords of wood annually. Also, of how it manages 2,500,000 acres of fee ownership lands.

PULP & PAPER's Southern associate editor toured the company's woods camps in a zigzagging course over several thousands of miles of the South to gather this material.

The Southern Kraft Division management faced a challenge of mammoth proportions in supplying the wood for its mills on a sustained yield basis. The manner in which this challenge was met makes an interesting story.

The story as it unfolds, dramatizes the vital importance of modern equipment in planting and harvesting the timber crop, the vital roles of the men who work and profit from this seed-to-pulp and paper cycle, and the policies of a far-seeing management in working harmoniously with hundreds of neighbors in the South in a vast economic project.

Part I, in our March issue, dealt with the overall picture and with the story in the area of Georgetown, serving the world's largest pulp and paper mill.

Part II, in our April issue, covered Panama City, Fla., and Waycross, Ga., areas. The series is concluded next month.

HANDLE ANY WOOD with LORAIN CRANES

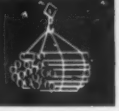
Any wood... anywhere... faster, cheaper, safer! Below are four pulpwood handling operations. Each is different—but a properly-equipped, suitably-mounted Lorain Crane solved each one. Ask your nearest Thew-Lorain Distributor what Lorains can do for you.

THE THEW SHOVEL CO. • LORAIN, OHIO

LOOSE

This Lorain 50-I *crawler* crane, with *pulpwood grab*, handles 15 to 20 cords of jumbled, loosely piled wood per hour. On blockpile work Lorains reduce accidents; eliminate hazards of dynamiting frozen wood; replace 20 to 30 men.

BUNDLED



At 30 mph this rubber-tire Lorain-TL *Moto-Crane* makes shuttle runs of 80 to 100 miles between 3 widely separated concentration yards where it uses *slings* to unload and load 2½ cord stacked bundles.

STACKED

A *grab* is used on this 15-ton Lorain-TL Self-Propelled Crane, to load chipper cars from the stockpile. Here's another attachment—and another Lorain mounting—one-man operated, with 7 mph mobility for use anywhere in the yard.

WET

Here, 3 big Lorain-820 Cranes with *pulpwood grabs* transfer big bites of wet wood from the water to a barge. This mill uses 17 Lorains to help get 450,000 cords delivered to the mill the same year as cut. *(Names of all owners on request.)*

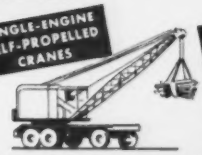
TRAVEL ANY WHERE

Most Lorain Cranes are available on 3 mountings, to match the ground, travel and mobility demands of mill.

CRAWLER MOUNTINGS

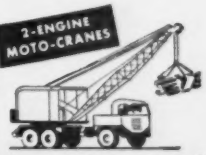
For infrequent travel (1 to 2 mph) where terrain demands soft-ground flotation and traction. Capacities from 6 tons up.

SINGLE-ENGINE SELF-PROPELLED CRANES



Single-engine, one-man rubber-tire cranes for local-load mobility up to 7 mph. Capacities from 10-tons up.

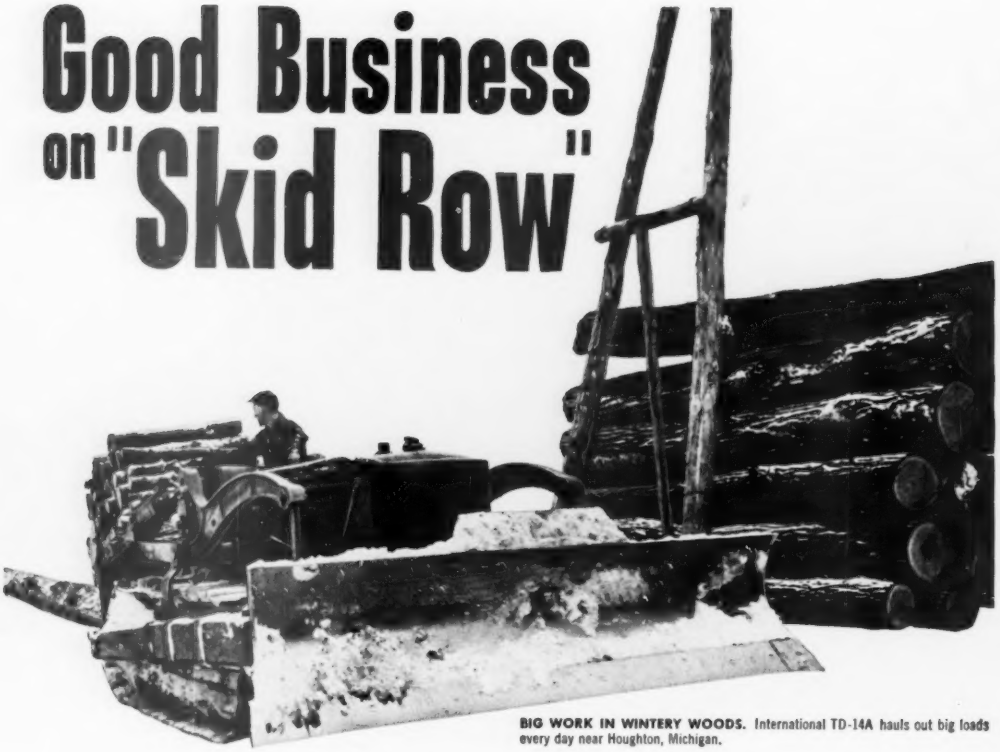
2-ENGINE MOTO-CRANES



High-speed, 30 mph unlimited mobility. Also for off-the-road travel. Crane capacities from 10-tons up to 45-tons.

THEW LORAIN® CRANES for PULPWOOD HANDLING

Good Business on "Skid Row"



BIG WORK IN WINTERY WOODS. International TD-14A hauls out big loads every day near Houghton, Michigan.

How International crawlers help put the profit in skidding out timber for National Container Timber Corporation

Skidding or snaking, it's cost control that makes for good business.

That's why National Container Timber Corporation chooses equipment that keeps busy all day long. In one average working day, one International TD-14A pulls out these big log loads, or carves out a quarter mile of road, or works on the odd jobs—piling, dozing, grading—in heavy forest near Houghton, Michigan.

Timber Division Manager J. W. Haley says: "Our TD-18 has been skidding heavy timber constantly for three to four years. The TD-14A alone skids out ten to fifteen thousand board feet per day. Our International TD-6's and TD-9's are doing fine, too."

This kind of performance is good business for any big business. And working hand in glove with the rugged endurance built into every International is your International Industrial Distributor. He has full stocks of parts and maintains modern shops staffed by factory-trained mechanics to keep your equipment in top shape. See him for "power that pays" through the years to come.

INTERNATIONAL HARVESTER COMPANY
CHICAGO 1, ILLINOIS

SNAKIN' 'EM OUT IN SNOW. Snaking out pulp timber for National Container Timber Corporation keeps this International busy in snow time or summertime.

INTERNATIONAL HARVESTER

INTERNATIONAL

POWER THAT PAYS

VIEWS taken by PULP & PAPER Editor in Mobile and Canton, Miss., Divisions of Southern Kraft's Woodlands operations:

1—B. T. Smith, logging contractor, loads out a Dodge dual wheel truck on a selective cut on Canton lands. A Loggers' Dream is used here for skidding and loading. It appears in background.

2—An important factor in low cost equipment maintenance, and low cost pulpwood, is a good woods trail or road. This Austin (55) Western motor grader helps achieve this in the Carthage district.

3—This fine stand was logged 10 years prior to, and burned annually, before, acquisition by Southern Kraft Division in 1929. It stands on an old settler's road from Blakely's Island to Pensacola, used during Civil War. Growing from residual seed tree clumps, it averages 55 feet high and runs 22 cords per acre.

4—Ordinarily this 86-foot lookout tower at Carthage, Miss., would have cost $2000 to $2400 but conversion of a ($503 delivered) second hand oil derrick cut the cost to $1200. Corners are set in concrete blocks 5x5 by 6-feet deep and weighing 4 or 4½ tons. Look-out's cabin is sealed inside; equipped with 2-way Knar radio, outside and forest telephones; electricity for heater, etc.

5—L. H. Smith, logging on Canton division lands for King Lumber Industries, Inc., uses this International TD-9 tractor and Bucyrus-Erie bulldozer to break woods trails.

6—This 40 year old timber stand is undergoing selective turpentining for a six year period. Afterwards the "cat face trees" and thinning pulpwood will be taken out.

clubs. Control of hunting has increased the game population.

Fortunately Mobile offers a market for fuelwood or otherwise unmerchantable hardwoods, scrub oak that intrudes in young longleaf stands, and for butt cuts from cat-faced turpentined pines. Other, more profitable business, is done in merchantable hardwood and pine sawlogs, poles and pilings, peelers (hardwood veneer logs), stumpwood for naval stores, posts, and cat-faces for fence posts. Between 14 and 15 million feet have been sold annually since 1944.

A turpentine operation is conducted on a selective basis. Stands to be cut in the near future are marked and then the selected trees leased to naval stores operators for three years. Should the saw timber market turn soft, cutting may be deferred while another face is worked.

Where old turpentine faces abound the balance of the stand (usually saw timber size) is turpentined under this plan, then the tract given a seed-tree cutting or else clean-cut and replanted completely.

In sales of merchantable timber the general program is to mark and estimate the stand, then sell on a bulk basis.

Currently favored for combined service for timber marking and fire suppression is a radio equipped jeep with fire line plow attached. The district has three. Other equipment includes: a Ford pick-up truck with radio and fire fighting items; a 2-ton International KB-7 truck; and International TD-6 tractor; with Bucyrus-Erie dozer blade; and a Mathis fire line plow. The jeep plow attachment is made by Little Motor Co., Bay Minette, Ala.

There is a close tie-up between the company and state agency in fire suppression. Most of this equipment is state owned. Company equipment is selected for dual purpose of productive work plus fire control. The state maintains fire towers, suppression equipment, and short wave radio. The company has used the state radio wave frequency. Sometimes planes are used in fire spotting.

The Baldwin district has a lot of well drained bottoms in which yellow poplar is coming in strong. This promises a fast growth that will run to a better market quality than gum or bay, commanding a good price. Management is working to convert these into stands of yellow poplar, and is taking out the other hardwoods.

Mobile District

The Mobile district, west of Mobile bay and river, has about the same equipment as that in Baldwin. The lands of Mobile district and in Mississippi are more scattered than those of Baldwin.

In Mississippi, a large part of fire suppression equipment is company owned. This includes three small Oliver tractors with fire line plows; a Dodge 1½ ton truck to transport tractor and plow; three two-ton Ford trucks; and two large Crawler type tractors; one jeep with radio and plow. In Mississippi also the state's fire control radio frequency is used by the company.

Lands owned by the company are surveyed and exterior boundaries kept well marked with aluminum paint. A good supply of this is kept on hand; land lines are continually refreshed.

The district has a 12-acre slash pine plantation just north of Ocean Springs that was set out in 1926. The plantation has yielded 27 cords per acre in four cuttings (1939, 1942, 1944, 1949). In 1949 the trees stood 75 to 80 ft. in height with an estimated 31 cords per acre after the thinnings.

A considerable amount of conservation work is performed in the district.

In the Mobile mill procurement territory

MIKE STALMUKE (left), Wood Procurement Supt., Moss Point, Miss., Division of International Paper Co.'s Southern Woodlands. A. K. DEXTER (right), Division Forester, Canton, Miss., Division of I. P. Woodlands.

EDWARD "MAC" AYLIN (left) District Forester for Baldwin County, with headquarters at Bay Minette, Alabama, and VICTOR LOGAN (right), Pulpwood Procurement Supt. for the new Natchez, Miss., Mill. He graduated in Civil Engineering at Arkansas, was in U. S. Forest Service five years.

(western Alabama and extreme eastern Mississippi) the majority of the pulpwood comes from small owners; all handled through dealer-producer organizations. Of the total, 36% of pulpwood has been trucked, 8% barged, the balance railroaded. A. D. Toler is procurement superintendent.

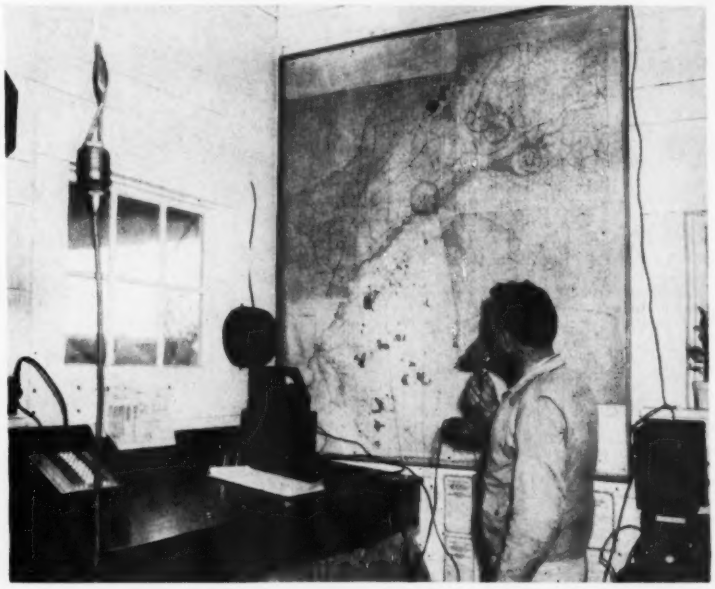
Until about four years ago, only a few of the big lumber companies did any thinning on their woodland holdings; little stand improvement cutting. This situation has been improving, with lumber mills selling pulpwood.

The trend toward conservation is strong. The producers are now more inclined to participate in the conservation program. Too, when they go into a marked stand of big ownership, it doesn't take as much time looking for the wood to cut, making for a more economical operation. Wood is purchased from about a dozen dealers. The company fee lands supply about five percent of the mill's pulpwood.

In the coastal areas the favored producer equipment includes a dead-axle tandem 1½-ton truck, preferably Chevrolet or Ford; a wheeled pulpwood saw used for 95% of felling and bucking, and frequently a Ford farm tractor for snaking and bunching.

In the hills, producers use a long wheel base 1½-ton two-speed axle truck. About 75% of these are either Chevrolet or Ford, divided about equally. Of the balance, GMC and Internationals predominate, with an occasional Dodge or Studebaker. In brushy, rough hill country, felling and bucking is with bow saw or conventional cross-cut, although some power saws are used. If the latter are utilized teams are used to bunch tree lengths to the saw, located where the truck can pick up the load.

One of Mobile mill's resourceful shippers is S. M. Adams (Inc.) of Plateau, Ala., whose trucks are fitted with an extra pair of wheels on the back of a standard truck. When the pulpwood load goes on, the springs give, bringing the spare wheels in contact with the ground. When the load is lifted (it takes the mill crane 4 minutes) the body lifts, clearing the extra wheels once again. This saves tire wear on the extra pair. He has used a number



HERE'S THE HEART of "Central Fire Control Association" at Canton, Miss., the remote control station of the Kear 2-way radio operated by J. S. Tyler. Note map of the area, with those well-known pin points.

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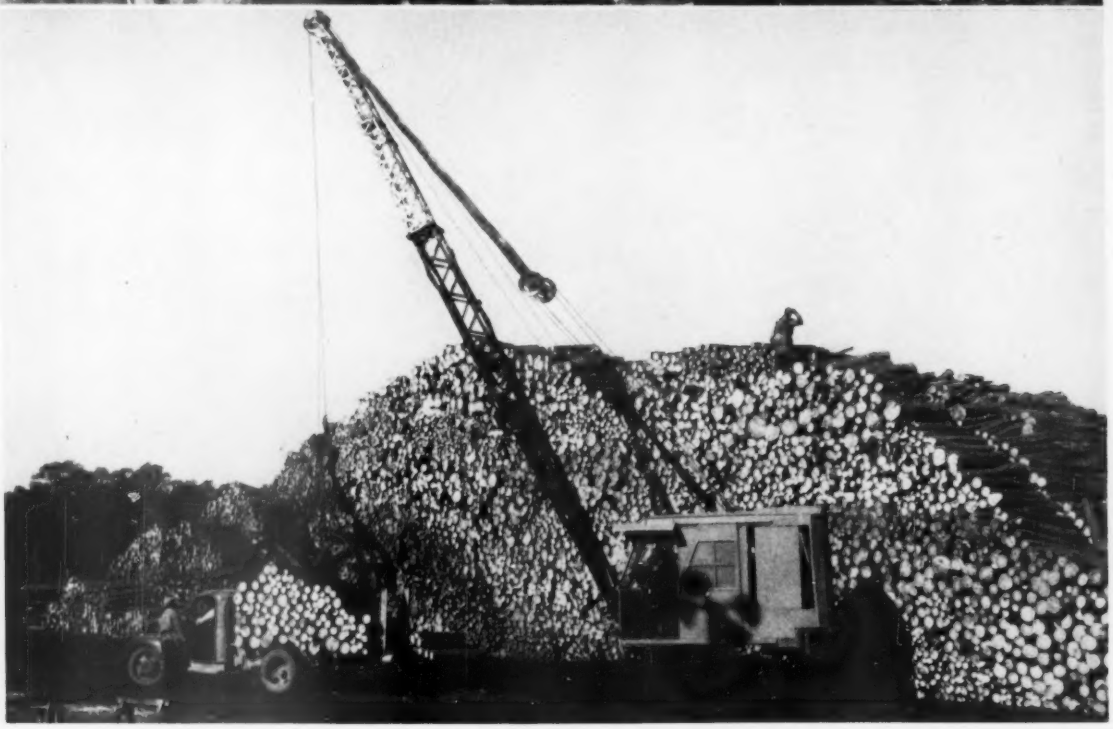

IN UPPER PICTURE A MINNEAPOLIS-MOLINE Power unit serves a cross-tie mill in Canton, Miss., Division of I. P. Woodlands in the South. At rate of 30 cents per cross-tie, it paid the Division $20,000 in one year; paying for stand improvement program while the trees it removed released growth. The way to get right trees to grow is make way for them.

BELOW IS VIEW of a crane lifting a third of a truck load of pulpwood for stacking at Moss Point, Miss., mill of International Paper Co.

of mechanical labor saving contrivances.

Forty miles west from Mobile, on the famous Pascagoula "singing" river is the Moss Point, Miss., mill. One of the oldest (1912) kraft pine mills in the South, this producing unit was acquired by Southern Kraft Division in 1928. At present its pulpwood consumption runs about 500 cords daily, or 3500 per week.

Its river bank site makes possible barging of pulpwood to this mill. Thirty percent arrives by water, 45% by rail, and 25% by truck.

The procurement organization is directed by Mike Stalmuke. Only 5% of production comes from company woodlands.

In Jackson county, near the mill, the

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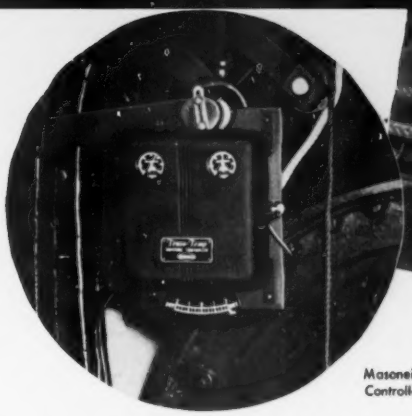
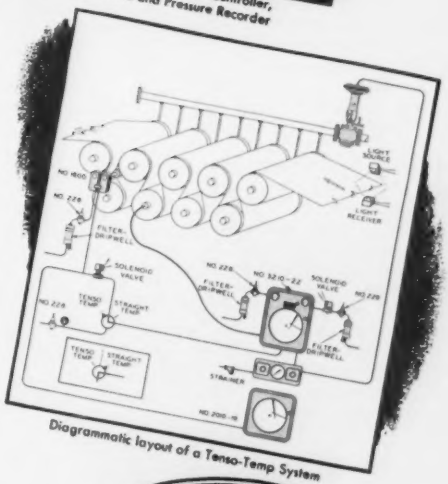


Masoneilan Moisture Controller



Diagrammatic layout of a Tenso-Temp System

In paper mill after paper mill, Masoneilan Tenso-Temp Controls are paying for themselves by reducing waste, providing more uniform quality and minimizing rejects. That's why you find Tenso-Temp specified and used in new installations and in modernization programs. Consider these additional advantages that make Tenso-Temp worth investigating for your mill.

Tenso-Temp is accurate because moisture contact measurement is averaged for the full width of the sheet. Response is instantaneous . . . variations in weight across the sheet do not produce false indication and inaccurate control.

Tenso-Temp is sensitive to the slightest variations in moisture content . . . precisely adjustable to maintain the desired moisture.

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public is more impressed with conservation cutting, having the example of a 55,000 acre tract that has been partially cut several times and a 25-year old pine plantation cut four times.

Pulpwood trucking distances for the Moss Point mill have been lengthening, averaging 14 miles during World War II but now running up to 45 miles. One difficulty with rail shipping is that when a truck arrives at a loading point and the car is not there, the truck has to unload and when the pulpwood is picked up again, it's an extra handling.

The operations for Moss Point involve use of nine rented barges and a towboat hired specifically for each towing job. In this way barging costs are paid out just like freight. The barges range from 50- to 175-cord capacity. The smaller barges are used where the larger barges cannot go. Also there is a Pascaguola river operation to Van Cleave, Miss., utilizing one tow boat and seven company owned barges.

A typical barge operation is that serving Sam Whitfield, Bay St. Louis shipper. He employs a timber marker; marking for the owners and paying for wood by the cord. Landings are operated at Kiln, on Jordan river, and Logtown, on Pearl river. Stiff-leg derricks powered with Buda gasoline engines are used for loading.

Natchez Mill

The new Natchez, Miss., mill procurement organization is under the direction of D. V. ("Vic") Logan, who also handles shipments of pine pulpwood produced in north Mississippi and shipped to company mills west of the Mississippi river. Until the Natchez mill was built, this territory was handled out of Moss Point. The Natchez mill was designed to use hardwoods. A large percentage of the wood from north Mississippi is produced by farmers.

Mechanization of the pulpwood supply has been hindered because so many producers are farmers who cut between seasons, or in off times. These are satisfied to use a bow or cross-cut saw, load up a light truck at the site, and bring it to the railroad. Probably ten percent of wood is cut with old-time cross-cut and an equal amount with power saws. The one-man chain power saw is preferred in the hills; the wheeled pulpwood saw locally where terrain permits.

What bunching is done occurs during extremely bad weather, a horse or mule being used. When light trucks are used they are generally 2-ton size and 75 percent are either Chevrolets or Fords. Small tractors are used to some extent in the hills for bunching.

Under Mississippi law leaving seed trees of 10-inch dbh or else 100 small trees per acre is required. The organization is getting good results in its efforts to induce producers to comply with the law and with cutting standards of the Southern Pulpwood Conservation Assn. Both company and association conservation foresters check on cutting practice. It is estimated that 54% of the pulpwood received is from partial cutting. In north Mississippi the producers and owners prefer seed-tree type cutting. In south Mississippi where seedlings come from faster starting and thicker stands, the leaving of small tree groups is preferred.

Canton, Miss., Division

One of the best examples of effective close cooperation in fire control, using short-wave radio as a tool, is provided by the Canton Miss., Woodlands Division. Here the company has joined forces with other forest owners in the "Central Fire Control Association" which holds a short-wave frequency, operates five Kaar master stations, a Canton office, four lookout tower stations, 14 mobile fire suppression units, and an airplane. Those in the association sign an agreement; pay on an acreage basis. The enrollment covers 200,000 acres of which 160,000 belong to International Paper Co.

Lands embraced in the Canton division are principally those under 99-year timber lease to International Paper Co. from Denkmann Lbr. Co. Total division acreages runs to 260,000 acres. A. K. Dexter, a Montana U 1922 forestry graduate with all the intervening years' practical experience, is division chief. He has two districts:: One at Carthage, Miss., under John Tyler, with 160,000 acres; the other at Amite, La., under W. H. Whitley, with 100,000 acres.

Use of radio made possible reduction of fire losses to a minimum (in one year less than 200 acres). On the average it takes 15 minutes to reach a fire with equipment, and on the day of the P&P visit there were 25 calls. Of the blazes, four were on adjoining property but would have spread to company lands if not promptly subdued. The combination of tower lookout detectors, Kaar 2-way radio, airplanes, and modern control equipment has the effect of confining most blazes to a half-acre area.

Equipment that can be brought to bear includes: three Studebaker trucks; two Dodge and 2 Chevrolet 1½ ton trucks; one Chevrolet pick-up truck (½-ton); two Dodge power wagons; four small Oliver crawler type tractors with fire line plows; one Ford-Ferguson tractor with terracing plow and two Cletrac BDH with Mathis type plows. Each Dodge truck is equipped with water tank and pressure spray pump. They also carry individual one-man Indian fire fighting spray units.

Jack Stewart, merchant and timber owner, Morton, Miss., is president of the Central Fire Control Association. Tom DeWeese, of A. DeWeese Lbr. Co., Philadelphia, Miss., is vice president; and the county agent, R. T. Hobson, at Carthage, is treasurer. Current dues in the association are 5 cents per acre, plus anything extra thrown in to make the work more effective.

In general the road system is adequate to reach the company fee lands but of course in those sections where population is sparse and county income light there exists a need for maintenance and some bridge work where woodlands operations require. Once reaching property lines there is required an amount of forest trails and their maintenance. In meeting this access task, which accommodates fire suppression, the division lost no time in laying down 50 miles of trails in Mississippi and and an equal mileage in Louisiana holdings.

In going over the Denkmann lands it was found that in many places farmers' cornfields, other activities, encroached on the property. This called for and resulted in marking the outside boundaries. Adverse possession was rolled back by setting out pine seedlings.

Equipment in the Amite, La., district includes: Three 1½ ton trucks, one each of Chevrolet, Dodge and Studebaker; one 6x6 Studebaker-Reo; four small Oliver crawler type tractors with fire suppression plows and trailers on which to be transported; 2 big Oliver (BDH) tractors with Mathis fire-line plow; one Ford-Ferguson tractor; eight 2-way radio sets leased to Louisiana Forestry Commission and installed in company equipment.

The balance of fire suppression equipment is provided by the state. On its lands the company pays 2 cents per acre fire tax and supplements this with 2 cents per acre contribution, plus the radio sets.

Solution of forest management problems has been aided in the Canton division by the ability of pine reproduction to overtake hardwoods where afforded an opportunity on good sites. In putting the division timber stands into condition, all cutting was preceded by individual tree marking.

The Carthage district provides some excellent examples of stand improvement with careful utilization of the forest. An instance (a minor operation) the cross-tie business of Walter Moore. He paid the company on a per cross-tie basis enough for the year's improvement program cost. In another location, logged a few years previously (2500 to 3000 feet per acre) for saw-logs and pulpwood, the management girdled hardwood trees of no commercial value. In every instance pine seedlings sprang up thick enough to give the ground a green sheen. Also a brisk sale sprang up for deadened trees of suitable size for fence posts, at a nominal price each on the stump. Not really a business, but it brought in money.

In the stands worked for cross-ties, cuts good enough for stave blocks went for that purpose at the higher prices. Where (hardwood) trees were cut for cross-ties the deep side cut resulting from squaring out the cross-tie was made to produce a product for the hardwood lumber market where quality was high enough. Wolf trees were removed or girdled to let in sunlight to an eagerly waiting understory of pine.

Of cutting, 99% in hardwood went to lumber and extras; 55% in pine went to lumber, 23% to pulpwood, and the balance to poles and piling. In the Louisiana district, of quality improvement cuttings, 80% was in pine and 20% in hardwood. Of miscellaneous non-lumber qualities, 60% was hardwood and 40% pine. Pine enjoys a rapid growth, as by example, 75 to 82 foot piling from 25-year old trees harvested at Alligator Lake, near Grangeville, La. The program pushes for pine reproduction.

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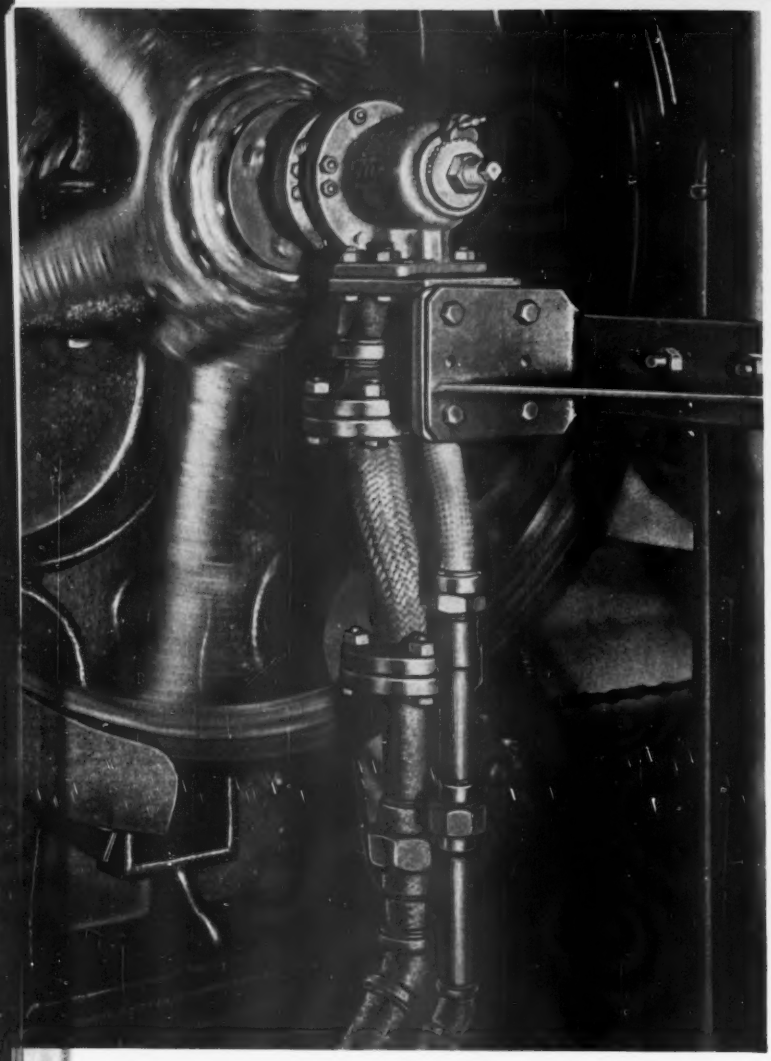

At left, Steam Joint constructed for use with adjustable single Drop Type Siphon.

Below, Dual Revolving Type Siphon Arrangement.

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ORPHAN WOOD IN WASHINGTON

THESE WEYERHAEUSER TIMBER CO.'s views illustrate how wood resources are increased in Washington (l to r): Woodpickers in sawmill select wood for pulp; a barge at sawmill loaded with chips; small white fir woods left-overs good for pulp.

Business opportunities abound in unused wood piles of the state of Washington, says the State Institute of Forest Products in Seattle, headed by Ralph G. DeMoisey. A new type of timber cruising has revealed a tremendous volume of wood left over each year after logging and manufacturing. Never before had any state attempted the magnitudinous task of determining in exact detail the concentrations and locations of its residual wood. With the aim of expanding its use and thus helping to perpetuate timber resources, such a survey was completed this year by the Institute.

Leavings of the forest industry in Washington accumulate at the rate of 210 million cu. ft. every year. That by-passed in western Washington would support at least eight kraft mills producing almost 900,000 tons of pulp annually, says the Institute. Kraft paper and container markets have expanded at the rate of 5% per year for 25 years and supply is still short of demand, it stated.

If residual wood of the state logging camps and sawmills were hydrolized into wood sugar, it would produce 125 million gallons of industrial alcohol and relieve substantially the critical shortage of synthetic rubber. Many other chemical and fiber products could be made. Some synthetic boards may be fabricated for as little as one cent a square foot in small plants costing less than $20,000.

In the past much material would scarcely pay its way into competitive markets. Logging methods have been improving and wood-using industries are integrating more and trading among themselves, peeler logs for plywood plants, sawlogs for sawmills, pulpwood for pulp mills, etc. The turning point came with favorable markets. Raw wood was beginning to cost more, and it was discovered that sawmill residuals and logging leftovers were cheaper to acquire than virgin timber back in the mountains.

It is impractical now to salvage wood beyond 500 feet of a road and even some of that has been left behind because it was so shattered that it would spill from a choker. Resulting net volume of available wood from Washington log production amounts to 113 million cu. ft. This wood is ready to serve a useful purpose.

Already concentrated at the "tail-end" of manufacturing plants in the state are 46 million cu. ft. of partially-manufactured wood crying to be used. In addition, 318 million cu. ft. of so-called mill waste are used for fuel or sold to fuel users. With other fuel materials available, higher uses are indicated for these resources collected at or near market areas.

A third item is the 50 million cu. ft. of tall slim poles in crowded young forests, that die of competition in nature's race for survival unless harvested through periodic cutting.

Above and beyond the leftovers, is the astronomical stockpile of "little-used" species. The U. S. Forest Service places the volume in Washington at 3.4 billion cu. ft. This mature reserve stand includes thousands of acres of lodgepole pine, once a "weed" tree but now known to contain pulping qualities. Other species such as Engelmann spruce, Alaska yellow-cedar and mountain hemlock have use qualities.

Costs of Kraft Mill

"A kraft pulpmill that produces 200 tons of pulp per day from 40,000 cubic feet of raw wood will cost about 12 million dollars to build," says the Institute, "It requires a 10,000-kilowatt power unit or equivalent in purchased power. It must use rail or water transport. On land it would use eight r.r. cars each day. It would employ 600 persons, with two million dollars in pay to support a community of 5,000 people. It would require upwards of 30 million gallons of water per day."

The leftover wood is inexpensive and lies, on the average, 32.7 miles from manufacturing centers, main-line railroads or tidewater, says the Institute. It costs 3.7 cents per ton-mile to truck to those facilities.

Godwin Re-Elected Head of Canada Group

Gordon Godwin, (left) asst. general manager of woodlands, Ontario Paper Co., and pioneer in the use of mechanized logging equipment in the eastern woods, was re-elected chairman of the Woodlands Section, Canadian Pulp and Paper Association, at the annual meeting in Montreal, Mar. 29. J. B. Matthews, chief forester, Abitibi Power & Paper Co., is vice chairman, and the following woods managers and others chosen councilors:

R. S. Armitage, Price Brothers & Co.; G. H. Fisk, Powell River Co. and Pacific Mills; F. A. Harrison, Canadian International Paper Co.; R. G. MacFarlane, Anglo-Canadian Pulp & Paper Mills; J. A. Michaud, Consolidated Paper Corp.; G. W. Phipps, Spruce Falls Power & Paper Co.; W. B. Southon, Great Lakes Paper Co.: L. L. Wetmore, St. Lawrence Paper Mills; W. F. McColm, Donnacona Paper Co.

Ex-officio members of the council are C. R. Mills, manager Ontario Forest Industries Association, and Edgar Porter, Quebec Forest Industries Association.

Awards went to Duncan Naysmith, divisional forester, Manitoba Paper Co., for conservation work near Pine Falls; T. Summers, Ontario Paper Co., Heron Bay, for development and application of the Summers self-loading sloop; A. M. Stewart, woodlands training supervisor, Price Bros., for his paper on training choppers on pulpwood operations; Albert M. Martin, woodlands manager, Bowater's Newfoundland Pulp and Paper Mills, for his paper on mechanical loading by barges and discharging of pulpwood in Newfoundland, now with Bloedel, Stewart & Welch at Port Alberni, for a paper on mechanical logging in Newfoundland.

OFFICIALS OF NEW ZEALAND FOREST PRODUCTS, LTD., now carrying out a $20,000,000 kraft pulp and paper expansion "Down Under" (left to right): DAVID HENRY, Managing Director; M. R. BUCKETT, Assistant General Mgr.; R. H. SMYTHE, Secretary; J. T. CHRISTIANSEN, Pulp and Paper Mill Superintendent; H. W. KILGOUR, Superintendent-Engineer, and A. W. MACKNEY, Chief Chemist.

NEW ZEALAND'S BIG PROJECT

$20,000,000 Kraft Expansion Based on Pine

An expansion program of N. Z. Forest Products, Ltd., in New Zealand, largest timber utilizing concern in the Southern Hemisphere, is well under way, involving expenditure of some $20,000,000 in a 300-ton kraft pulp mill and a kraft paper mill with an initial output over half of that.

Foundations for the pulp mill were laid in September and it is expected that the plant will be in operation before the end of 1952, the paper mill about a year later.

David Henry, Scottish manufacturer who emigrated to New Zealand and is today regarded as the dean of the forest industries in that country, visualizes forest developments that will result in the investment of more than $200,000,000 for processing plants employing 20,000 or more persons.

Mr. Henry, who recently toured eastern Canada and the United States, told PULP & PAPER that Britain's crisis over newsprint supplies could well become permanent unless she looks for new sources within the Empire, and he believes that New Zealand can play an important part in maintaining those supplies.

"New Zealand's fast growing exotic pine forests are the logical source of pulp, paper and newsprint," continued Mr. Henry. "New Zealand, within a few years could become not only self-supporting in newsprint, but a valuable exporter to Australia and Far Eastern countries, and perhaps even further afield.

"Obviously, if such development were to be realized, government assistance in providing more electric power, roads and railroads in the rich timberlands of central North Island and other forms of cooperation would be essential."

New Zealand Forest Products has a license under the Industrial Efficiency Act to operate the sole kraft, pulp and paper industry in the Dominion. The license is for an indefinite term, and so is the arrangement which in the U. S. would be called "monopoly." The government will decide when and where and who, relative to a second mill in that industry.

Mr. Henry expressed himself as completely confident in whatever decision they may make in the future. He claims a very intelligent and accurate study is at the heart of the Industry Board which has, and accepts in many cases, advice from private industry. Foreign operators are kept out.

New Zealand has 850,000 acres of man-planted trees 14 to 24 years old, Mr. Henry told PULP & PAPER when he was in New York City, as he prepared to leave his chief chemist and pulp superintendent and fly home via San Francisco. The growth of New Zealand's Pinus Radiata (originating in the Monterey and Carmel areas of California) is phenomenal. New Zealand Forest Products owns 200,000 acres—almost one-quarter of the total. The government owns about half of the 850,000.

Purchases of Equipment

Coming by way of Hong Kong, Mr. Henry and A. W. Mackney, chief chemist, spent considerable time in Europe, Scandinavian countries, and Great Britain, inspecting mills and purchasing equipment. Mr. Henry said that he intended to purchase some equipment in the U. S. and would have liked to buy the majority of it here, but the dollar situation prevented it. Great bulk of the four and a half million pound expansion that is to go into machinery, was spent across the Atlantic. The kraft machine is from England, which sold several other key pieces of equipment along with Sweden and European countries. A gang mill comes from Sweden, but the band mill will be American.

The expansion program includes sawmills, pulp mill, paper mill and corrugated container plant. It now has a 65-ton paper mill for multiwall bags, licensed exclusively to this organization by St. Regis Paper Co. The products in this varied organization also include wallboard, sawn timber and veneers.

The forests have grown from nothing in 24 years or less; the government, now resettled on the conservative side, combines with private industry to control the use of timber.

The timber grows in its quarter century cycle under the New Zealand Forest Service and nobody worries that the virgin timber, such as it is, will be gone in seven or eight years.

Mr. Henry and his chief chemist, Mr. Mackney, left their homes on March 4. In Manhattan, Mr. Henry was completing his final American purchases—Bauer Pulper from Bauer Bros., Oliver United screens, Downingtown rolls and an electrically heated press for dry board.

Mr. Henry's company, N. Z. Forest Products, Ltd, is much further advanced than the state or other private companies in the field of wood conversion in New Zealand. It is a vast organization by any standards, with 55,000 shareholders scattered literally all over the world, and certainly a mammoth organization for New Zealand, with a total authorized capital of 11,000,000 pounds Australian and assets worth 5,300,000 pounds.

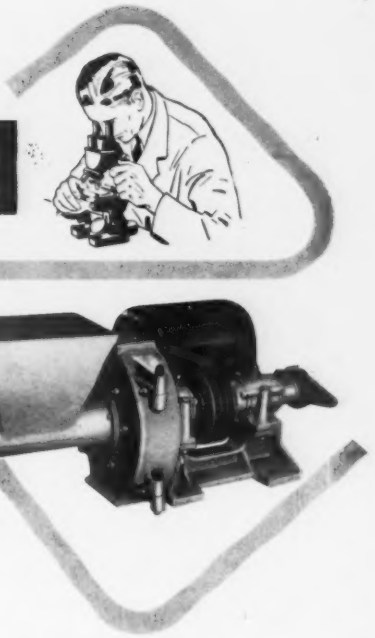
Appointment of several key men to operate the pulp and paper projects at Kinleith, near Tokoroa, has been announced. J. T. Christiansen, who will be pulp and paper mill superintendent, joined the company in 1948, on the recommendation of Karlstadt Mekanista Verkstad of Sweden, to supervise the design of the kraft mill. Between 1933 and 1937, Mr. Christiansen, now 39, was production engineer of United Paper Mills, Ltd., of Finland. During two subsequent years he was general superintendent of Kemi Kraftmill, Finland.

Resident engineer at Kinleith is A. R.

for low cost, experimental

PULPING and FIBER

studies

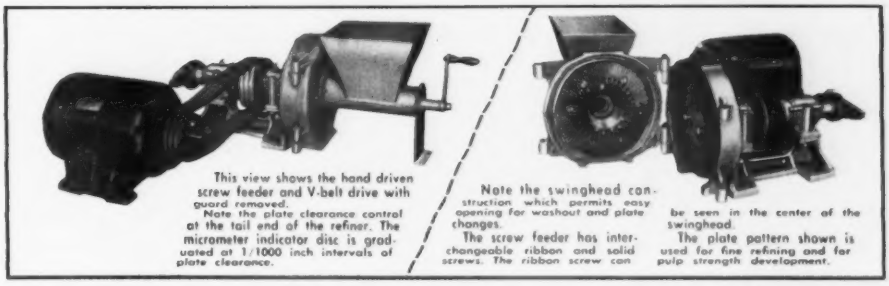


Now . . . you can get "controlled tests" in pulping raw, steamed, or semi-chemically cooked chips, fully cooked pulp, waste papers, straw pulp, Asplund fiber . . .

You can improve on your present pulping and fiber studies . . . and explore new possibilities . . . with the Sprout-Waldron "Lab" Refiner.

Designed for semi-plant-scale defiberizing, pulverizing, decorticating, blending, granulating and other specialized uses—on dry or fluid feed, hot or cold, high consistency or low—the Sprout-Waldron "Lab" Refiner combines simplicity of design and efficiency, with low initial and operating cost. Plate styles for a wide range of applications are available.

SPROUT-WALDRON 12" LABORATORY REFINER



This view shows the hand driven screw feeder and V-belt drive with guard removed. Note the plate clearance control at the tail end of the refiner. The micrometer indicator disc is graduated at 1/1000 inch intervals of plate clearance.

Note the swinghead construction which permits easy opening for washout and plate changes. The screw feeder has interchangeable ribbon and solid screws. The ribbon screw can be seen in the center of the swinghead. The plate pattern shown is used for fine refining and for pulp strength development.

Available with stainless steel construction

In daily use in many laboratories, both private and governmental, domestic and foreign.

Today . . . send for Bulletin 17 which describes this useful basic tool for laboratory and pilot-plant use. Complete specifications are included. Write to Sprout, Waldron & Co., Inc., 32 Waldron St., Muncy, Pa.

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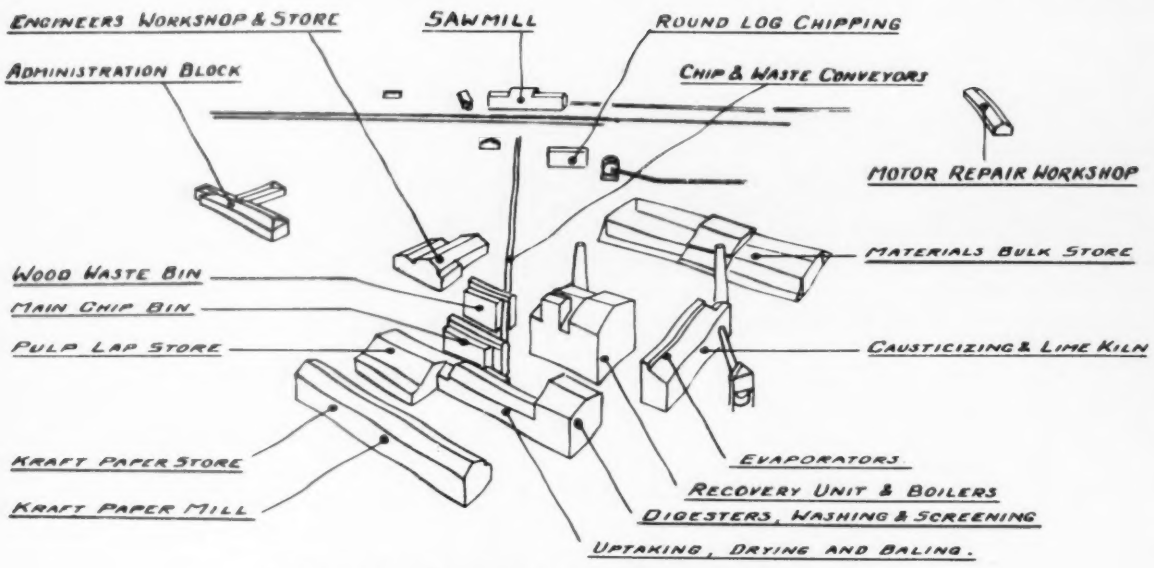


KINLEITH PROJECT OF N. Z. FOREST PRODUCTS LTD.

Here is complete laycut of vast expansion in New Zealand, including pulp and paper mills

Barlow, who recently went out to New Zealand from Northfleet, England, where he has recently been technical assistant to the chief engineer of the Bowater Paper Corp. Civil engineer is J. B. Wallace, who has been prominently identified with the ministry of works in New Zealand.

Manager of the pulp mill at Kinleith is Donald L. Stacey, who was manager of the N. Z. Forest Products insulating and hardboard division until 1948, when he went abroad to gain experience. He was with Bloedel, Stewart & Welch sulfate pulp mill at Port Alberni, B. C., for 18 months and later toured the U. S. and eastern Canada.

From the outset of its operations in logging and manufacturing, N. Z. Forest Products, Ltd., has cut timber on 5,000 acres of a total of 188,000 acres planted.

Commencing with a wallboard mill which shipped overseas about 60,000 tons of board for military use during the war, N. Z. Forest Products has forged ahead until it now employs nearly 1,000 workers. It has exported insulating board and hardboard as far afield as South Africa, India and China.

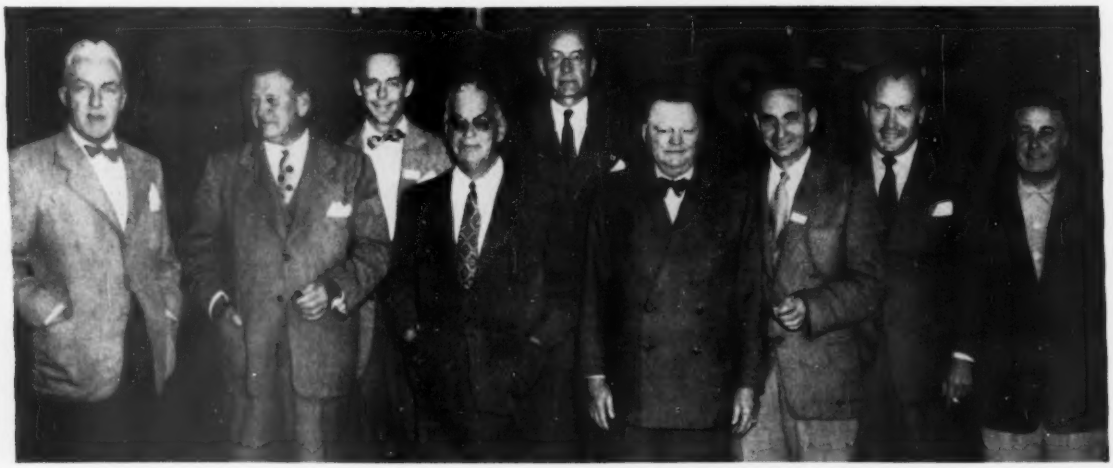
The company is manufacturing over 1,500,000 cases and shooks annually for packaging and more than 12,000,000 multiwall paper bags a year.

For the site of its new projects the company cleared 100 acres of forest two years ago at Kinleith, on the fringe of a 50,000-acre pine forest.

The total production of sawn timber from all sawmills when the Kinleith project is completed will exceed 65,000,000 super feet per year. The gang mill and bandsaw mill are to be integrated with the kraft pulp and paper mills.

Half the output of kraft pulp will be supplied, under a 20 years' contract, to Australian Newsprint Mills, Ltd., of Boyer, Tasmania. It has been demonstrated that New Zealand-grown Pinus Radiata is entirely suitable for producing long fibered chemical pulp with Australian groundwood in the newsprint mills.

DIRECTORS OF POWELL RIVER CO. from several cities in the U. S. and Canada visited the company's mills at Powell River, B. C. They are, left to right: HAROLD S. FOLEY, President; J. GLEN SAMPLE, ANSON BROOKS, EDWARD BROOKS, A. H. WILLIAMSON, ROBERT H. SCANLON, GEORGE W. O'BRIEN, WILLIAM S. BROOKS and M. J. FOLEY. The visit to the mill was anything but a pleasure trip. The directors really went to work, visited every department, studied engineering reports, and familiarized themselves with the expansion program now in full swing.



For the Future

Planting slash pine seedlings by machine in an open area.

The seedlings planted by St. Regis each year are insurance that basic raw material for the Company's pulp, paper, board, bags and plastics will continue to be available.

Serving important segments of American industry—meeting diversified requirements for war or peace—St. Regis plants, factories and people are producing and expanding . . . with confidence in future demand and assurance of future raw material supply.

SUMMARY OF CONSOLIDATED INCOME

For the Years Ended December 31, 1950 and 1949.

	1950	*1949*
Net Sales, Royalties, and Rentals	$154,789,186	$127,335,591
Cost of Sales and Expenses	$134,376,511	$118,719,146
Operating Income	$ 20,412,675	$ 8,616,445
Income Credits	$ 1,362,283	$ 992,916
Gross Income	$ 21,774,958	$ 9,609,361
Income Charges	$ 1,626,088	$ 1,542,833
Net Income Before Provision for Federal and Foreign Taxes on Income	$ 20,148,870	$ 8,066,528
Provision for Federal and Foreign Taxes on Income	$ 8,525,126	$ 2,588,325
Net Income	$ 11,623,744	$ 5,478,203
Dividends Paid		
Preferred Stock	$ 752,105	$ 798,575
Common Stock	$ 3,619,500	$ 3,102,428

ST. REGIS PAPER COMPANY

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Offices in Principal Cities—In Canada: St. Regis Paper Co. (Can.) Ltd., Montreal

OHIO BOXBOARD DEVELOPMENT

OCO Water System Going in Other Mills

A new industry development in succesful operation for some time now on two of the four paperboard machines of Ohio Boxboard Co., Rittman, O., is the OCO water system, a pressure filter-type saveall and recovery system for processed water, fibers, fillers and heat. As the name indicates, of course, it is an offshoot of Ohio Boxboard Co., whose staff developed the equipment in a research program that began in 1943. The system has been installed in a second mill recently and will be used soon in three more.

As something new, it was featured in one of the reports given at the summer meeting of the Canadian Technical Section in Quebec City. This report was prepared by George C. Ehemman, plant engineer; L. K. Burnett, quality control engineer, and John C. Waddell, development engineer, all of Ohio Boxboard, which holds all patents.

They described the OCO system as a layout for selective return of high solids process water to the system and for positive filtration of remaining low solids water with a plate and frame type filter and a filter aid. The filtered water is substantially free of suspended solids and they described it as entirely suitable for low volume high pressure felt and wire showers. Recovered solids are used, of course, as furnish.

In their paper, they said recovery of paper mill white water was desirable in order (1) to reduce production costs; (2) to conserve diminishing supplies of fresh water; (3) to recover heat and (4) material otherwise wasted, and (5) to eliminate this type of pollution.

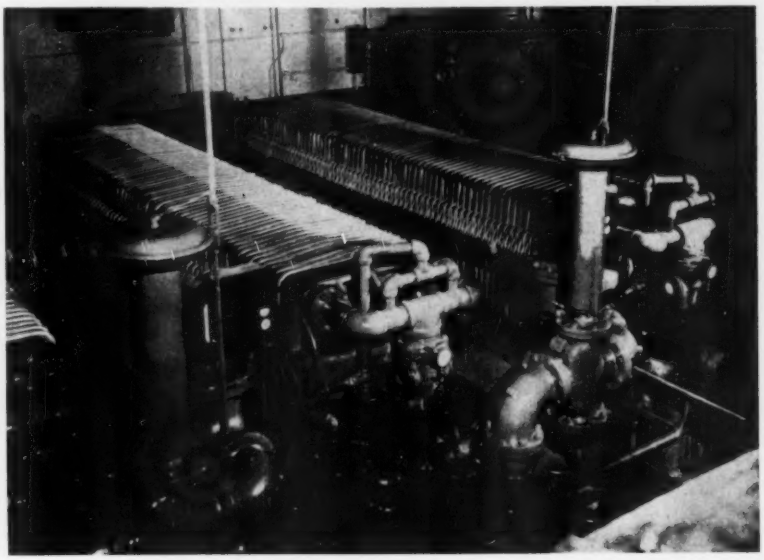
Ohio Boxboard has four cylinder machines, making 500 tons a day of folding carton, container liner, and specialties. Thus far, here is the only mill using the OCO system. Therefore, the system is of particular interest to board mills, because of the actual experience in this type of mill. At Ohio Boxboard, the system is in use on two seven-cylinder machines—one a 96-inch machine making 75 tons a day; the other a 120-inch machine making 120 tons. A saving of about 30 cents per ton of board is reported as a result of the furnish changes made possible by increases in brightness of the board when using OCO filtered water in place of fresh water.

Costs for System

If a mill system can be closed with one filter, it is estimated $15,000 of basic equipment is required—a 1,000 sq. ft. plate and frame filter press, a set of 65 filter cloths, a Rotameter, a slurry mix tank and dry feeder assembly and two 40 h.p. centrifugal pumps—plus showers, valves, piping, standby pumps, cake handling and chlorine dispending units which bring total cost to $25,000-$50,000. Total installation costs for a 500-ton mill is estimated at $100,000. Savings from heat recovery alone are calculated to balance cost of materials, such as filter papers, alum and chlorine.

At Rittman, the two machines where the system is applied are arranged to return high solids white water to the beater room and to discharge low solids water to the OCO system. They are equipped with high pressure low volume showers. Oscillating jet showers are used on cylinder molds and on felts. Part of the partially clarified water from settling tanks is passed through three plate and frame filters. Filtrate from them is used exclusively on low volume showers and the filter cake is mixed with sludge from the settling system and returned to the mill as filler furnish.

OPERATING VIEW OF OCO WATER SYSTEM FILTERS. This saveall and recovery system has been pioneered at Ohio Boxboard Co. Sandy Hill Iron & Brass Works, Hudson Falls, N. Y., in the east, and Valley Foundry & Machine Co., Fresno, Calif., in the west, will make this equipment.



Effluent white water to the settling system is treated with about 70 parts per million of alum to aid flocculation. It is pumped to two 225,000 gal. settling tanks where solids content is reduced from 5-10 down to ½ lbs. per 1,000 gals., approximately. Part of the partially clarified water from top of tanks goes to plate and frame filters and the rest to a reservoir for re-use.

The portion to be filtered flows to two 750-gal. slurry tanks where filter aid is added and is pumped to three 1,000 sq. ft. plate and frame filters. Each filter press consists of 65 cell units. Filter papers, made of any porous heavy paper or light paperboard, are used to eliminate need of precoating with heavy layer of filter aid before each cycle, and this prevents plugging, lengthens filter cycle, provides more cake space and lessens cleaning. A flow Rotameter is at each filter inlet.

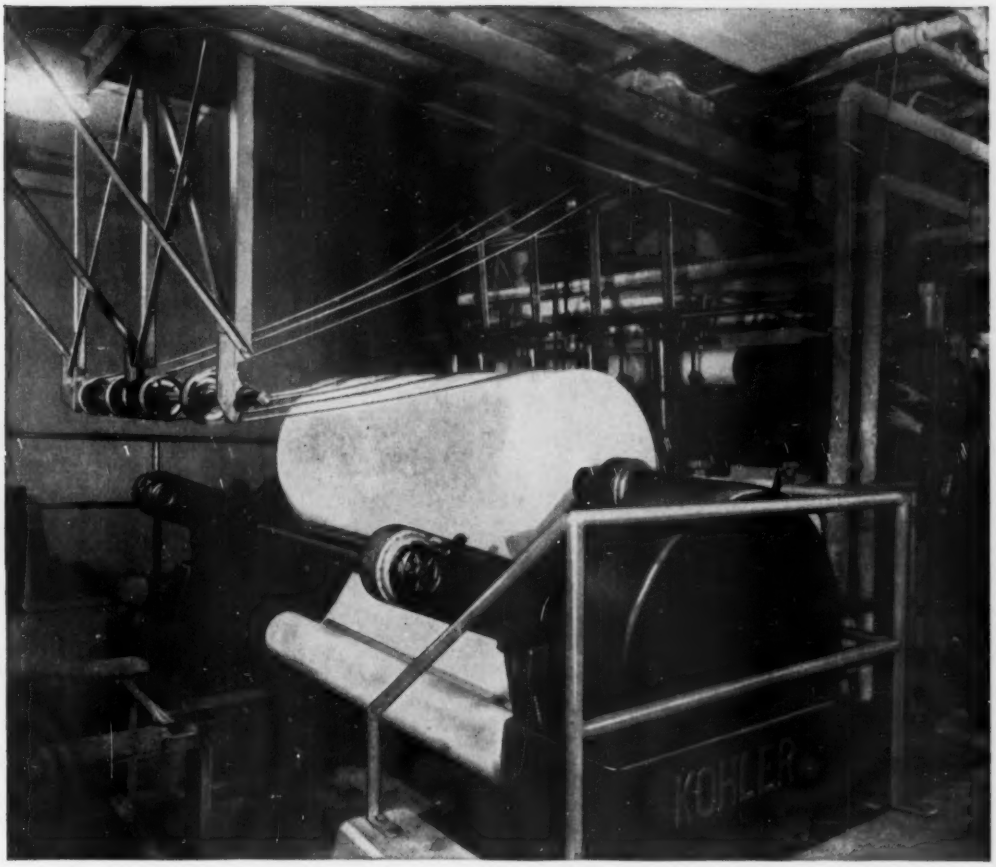
Filters are connected in parallel across common supply and discharge lines, and so each filter operation is independent. At end of cycle, the filter press is opened, cakes and forming paper are dropped to a chest, mixed with sludge from the settling tanks, and returned to the mill as furnish. Time to clean and re-paper a filter was expected to be reduced to about 45 minutes by engineering changes.

Filtered water is pumped at 150 psi. and 480 g.p.m. to the 7-mold showers and two top felt and three bottom felt showers on each machine. The third filter is standby. Length of filter cycle has averaged 16 hrs., with filter aid addition of 4 lbs. per 1,000 gals.

Most bacteria is removed by filter to the cake and ⅛ of a lb. of bactericide per 100 lbs. of solids is used with combined sludge and filter cake. High temperature in Hydrapulpers also controls growth, as does further use of bactericide in slurry mixing. The small portion still in filtrate is controlled by chlorination.

Since using high pressure showers and chlorinated filtered water, which averages 30 degrees higher than the fresh water, the Rittman mill has extended its felt life by about 10% to 15%.

For installations east of the Mississippi, equipment is manufactured by The Sandy



Above—KOHLER MAGAZINE REELS AND ELECTRICALLY-OPERATED ROLL STANDS (FLYING PASTER) IN BIG CONVERTING PLANT.

Arm for Action...

If it's better wound rolls—if it's continuous unwinding and winding of rolls on the fly—if it's web control—if it's reduction of waste—if it's any of these things, a *Kohler System* will arm the converter for action.

Kohler high-speed roll-handling equipment also "pays off" in the paper mill—at the finishing end, on super calenders, on coaters.

Contact Dilts at Fulton.

KOHLER SYSTEM EQUIPMENT

PRODUCT OF

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Subsidiary: B-C INTERNATIONAL, LTD., 16 Catherine Place, Victoria, London S.W.1, England

C. E. CARPENTER, former executive of Ohio Boxboard, is President of Oco Water Systems, Inc., his headquarters at Fort Miller, N. Y.

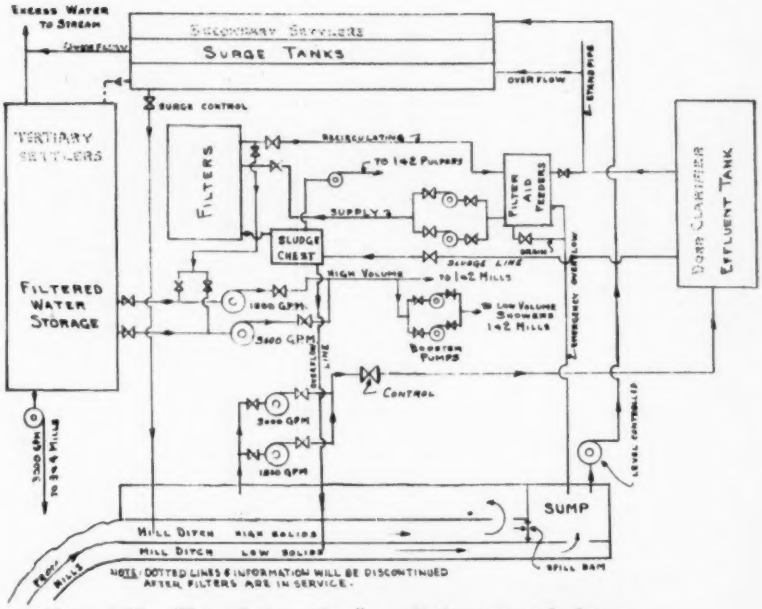
Hill Iron & Brass Works of Hudson Falls, N. Y., who also will handle export business except Canada and who have exclusive sales rights in the East except in Ohio, Indiana, Kentucky, Tennessee, Michigan, Illinois and Wisconsin, where sales rights are held by E. C. Jacobi of Green Bay, Wis.

Valley Foundry and Machine Co., Fresno, Calif., manufactures OCO filters for mills west of the Mississippi. Sales rights for the West Coast are held by A. H. Lundberg, 308 Orpheum Bldg., Seattle 1, Wash., and his associate, C. L. Koerner, 7604 Southeast 17th Ave., Portland 2, Ore.

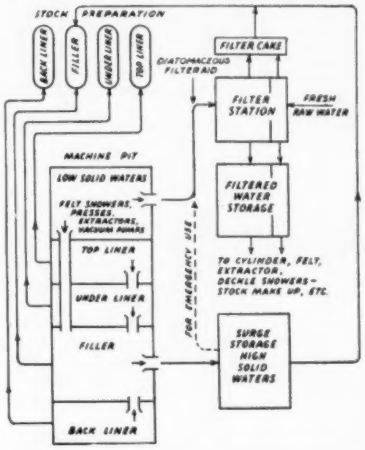
Sales and manufacturing rights for Canada will be announced in the future. Canadian inquiries are handled directly through OCO Water Systems, Inc., at Rittman, where E. L. Lukemire, vice president and general sales manager, has offices.

As of August 1, Oco Water systems, Inc., formerly a subsidiary of Ohio Boxboard, was sold to C. E. Carpenter, who retires as vice president of Ohio Boxboard on Jan. 1, 1951. Mr. Carpenter has been president of "Oco Water Systems, Inc.," since its organization. Main office is Fort Miller, N. Y., eleven miles south of Glens Falls, where Mr. Carpenter has maintained residence for many years.

LEFT TO RIGHT:
E. L. LUKEMIRE, Vice Pres. and Sales Mgr., OCO Water Systems, Rittman, O.; E. C. JACOBI, Green Bay, Wis., and COURT L. KOERNER, Portland, Ore., Regional Representatives for the new recovery system. Mr. Koerner, ex-Plant Engineer, Marathon Corp., Rothschild, Wis., moved early this year to 7604 SE 17th Ave., Portland 2, Ore., and is affiliated with HALVAR LUNDBERG, of Seattle, as Sales Representative.



OCO WHITE WATER FILTRATION SYSTEM ON PAPERBOARD MACHINE



Unique Psychology Course for Supervisors

The Gardner Board and Carton Co. of Middletown and Lockland, O., announces a new course for management personnel on human relations in industry conducted by Dr. Ralph R. Brown of Cincinnati. A series of six one hour meetings for all Gardner supervisory employes will consist of lecture and question and answer periods. The general subject of the courses will be the basic principles of psychology as it affects the relations of human beings in an industrial organization. Dr. Brown's approach will be of an informal, non-academic nature and will consist of a discussion of specific problems as they apply to plant and office operations.

Dr. Brown holds A.B., M.A. and Ph.D. degrees, is a certified psychologist in Ohio, and has been awarded diplomatic status in the field of industrial psychology. He was on the staff of the vice president of the Crosley Corp. and also served as Senior organization planning supervisor for U. S. Steel Corp. Dr. Brown said that he believed this new type of course was the first time such a presentation had been made for all supervisory employes in a large industry.

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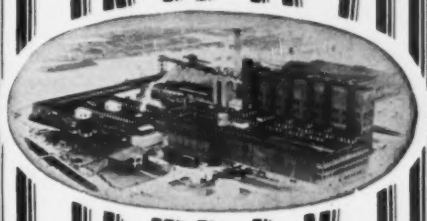

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EVERETT WASHINGTON

AN UNIQUE SCHOOL

KEEPS UP WITH DEVELOPMENTS

FIRST AND SECOND PLACE HONOR AWARD WINNERS OF THE CROWN WILLAMETTE PAPER SCHOOL appear in the top row (left to right): Dan P. Ashton, West Linn Mill First Place winner; Howard C. Hall, Camas Mill First Place; Robert Russell, West Linn Second Place; Francis T. Dowdy and Delbert M. Bush, tied for Camas Second Place. Each received an expense-paid tour of Pacific Northwest pulp and paper mills.

BELOW (l to r): Dr. Morgan S. Odell, President of Lewis & Clark College, delivering graduation address; Frank A. Drumb, Resident Mgr. at Camas and Regent of the Paper School; Frank N. Youngman, Vice Pres. of Crown Zellerbach Corp., who presented diplomas; Malcolm Otis, Resident Mgr. at West Linn and Regent of the School; A. G. Natwick, Dean of the School and Asst. Res. Mgr. at Camas, presenting an honorary Ph.D. on Harry H. Richmond, retired Chief Engineer of Electric Steel Foundry Co., for accomplishments in corrosion-resistant metallurgy.

One of the world's unique industrial educational organizations concluded its 18th consecutive school year in March with graduation of 185 students. The school—Crown Willamette Paper School, Camas, Wash.—has to date presented 2,551 diplomas, one annually to each student satisfactorily completing requirements for his or her class to be its 1st, 2nd, 3rd, or 4th year.

It is conducted by Crown Zellerbach Corp. for employes of that organization and its affiliates. Particular emphasis is placed by the regents, faculty and faculty advisors on keeping classes and courses current with up-to-the-minute information concerning developments in pulp and paper industry. This is facilitated through active participation of qualified faculty members holding key CZ plant, development, and managerial positions and the cooperation of lecturers from within and without CZ Corp. Outside lecturers from the colleges, supplier firms and the Crown Zellerbach forestry department present modern trends in cellulose usage, new chemicals for higher color bleached pulps, new logging developments, progress in growing new wood, use of electronic microscope in wood studies, steam generation developments, new discoveries in metallurgy, progress made in conveying methods, etc.

The school's faculty consists of men who are managerially experienced in some phase of the CZ mills, either at Camas or at West Linn, Ore. Each is a practical specialist, who thoroughly knows his field. These men have long and intimate familiarity with the manufacture of paper, of its components, and processes. Some of them must know far more than materials and mill behaviors. As pointed out in the school's graduation program, "They must know how Crown Zellerbach papers perform while protecting growing crops, and in wrapping and packaging everything from a perishable item like tomatoes to more durable goods such as cement and fertilizers. They know how necessary a quality product is to the customer and are able to explain why to the Paper School students or employes in various departments of the mill."

Frank A. Drumb, resident manager of the Camas plant, pointed out in his official welcoming remarks that here educational gleaning comes in addition to full-time industrial occupation. The instructors thoroughly know their subject from a practical standpoint and make it work every day.

He commended both students and faculty personnel—the students for application and perseverance to both their job and studies; the faculty for passing on information gained through years of work and study to the students, who may subsequently be competing for the instructor's job.

Dr. Morgan S. Odell, president of Lewis & Clark College, Portland, Ore., delivering the graduation address, stressed the need for more good men of high quality to meet problems ahead. He emphasized achievement of maturity, the marks of which include: Developing an outward focus leading to true evaluations, self-analysis, shaking off prejudices, and giving oneself to a great cause.

Diplomas were presented to 185 graduating students by F. N. Youngman, vice president of Crown Zellerbach Corp. Of these, 32 were for completion of the full 4-year course (the second largest in school history), 20 for the 3rd year course, 64 for the 2nd year, and 69 for the 1st year.

Mr. Youngman quoted the late Ralph A. Hayward, who died this year while president of Kalamazoo Vegetable Parchment Co., as follows: "Competition for jobs is important. This company grew great because a man could succeed in proportion to his ability. If we ever stifle this freedom, we stifle the country. The great men of this nation were great because of their ability, not because of their position on the seniority lists. Competition makes people strong, makes nations great."

He said the paper school is carried on in this same spirit of competition and accomplishments according to individual ability.

A. G. Natwick, dean of the school and assistant resident manager of Camas CZ mill, was toastmaster and presented honor awards.

To Harry H. Richmond, recently retired chief engineer of Electric Steel Foundry Co. and currently a consultant in engineering and metallurgy, was presented an honorary doctor of philosophy in metallurgy degree. This award, given in recognition of his outstanding contributions to industry, particularly in field of noncorrosive metals, is the highest given by the school—the fourth doctorate in its 18 years. The much surprised Dr. Richmond gave a brief acceptance speech, paying tribute to the Camas school.

Award Winners

Fourth year honor awards were tours of Northwest mills and other various prizes were given other honor students. They follow:

Fourth Year: Howard C. Hall, Camas, and Dan P. Ashton, West Linn, first places; Delbert M. Bush and Francis T. Dowdy, Camas, and Robert Russell, West Linn, second; Dudley F. Church and Robert G. Stewart, Camas, and Paul T. Davis, West Linn, honorable mention.

Third Year: Daniel H. Burnet, Camas, and Harlan S. Meeker, West Linn, first; Lauron R. Giersch, Camas, and Pierre F. Barnett, West Linn, second; Emerick J. Dobo, and Alan S. Rosenfeld, Camas, and Donald E. Abbott, West Linn, honorable mention.

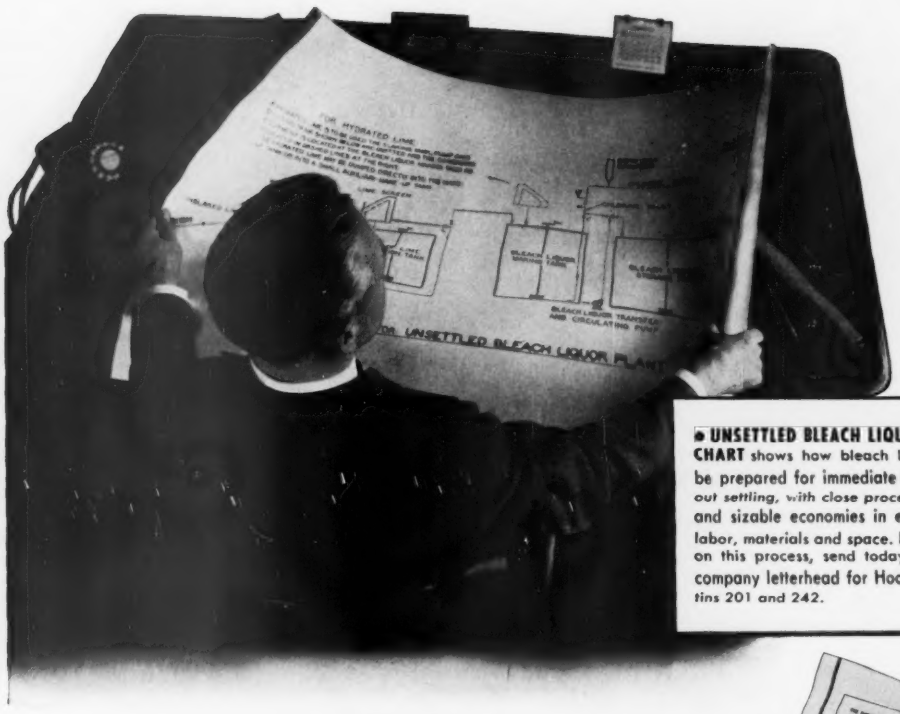
Second Year: Charles T. Devoe, Camas, first; William R. Thomas, Camas, second; Raymond W. Nordstrom, James A. Hansen, Richard S. Chisum, all Camas, honorable mention.

First Year: Daniel C. Leary, Western Waxed Paper Co., Portland, first; Rex R. Morris, Camas, second; Robert M. Samuels, James W. Rock and Kenneth W. Wind, Camas, and William P. Carr, West Linn, honorable mention.

FOURTH YEAR CLASS—FIRST ROW, left to right: Howard C. Hall, Sam Runyan, Joseph J. Boyle, Robert Russell, Charles R. Hash, William G. Daggett, Ellis B. Newkirk, Franklin A. Ackerman. SECOND ROW: John M. Sykes, Harry Larsen, Robert G. Stewart, James F. Wuenschel, Alfred Calhoun, Max L. Custis, Robert H. Olds, Wallace L. Kohl, Wendell L. Myers, Melvin Q. Tucker, John C. Woodward. THIRD ROW: Robert B. Bruning, Frank E. Caskey, John M. Tilden, Millard V. Stout, Paul T. Davis, Claude F. Chevron, Gordon A. Atkins, Dan P. Ashton, Philip E. Langland. FOURTH ROW: John K. Spence, Dudley F. Church, Delbert M. Bush, Francis T. Dowdy.

THIRD YEAR CLASS—FIRST ROW, l. to r.: George F. Rink, Floyd W. Blanchard, Harlan M. Meeker, Pierre F. Barnett, Donald E. Abbott. SECOND ROW: Chester A. MacNeil, Emerick J. Dobo, McClellan Thornton, Lester O. Hagen, Alan S. Rosenfeld, William R. Cudney, Lauron R. Giersch, Robert C. Gilardi, Fred W. Stoltz. THIRD ROW: Don A. Pickering, James C. Nissen, R. W. Hirsekorn, David L. Hall, Robert F. Ditewig, Duane H. Burnet.

SECOND YEAR CLASS—(FIRST PICTURE) FIRST ROW, left to right: Donald K. Preuss, Albert J. Beauchamp, Fanny K. Mackey, Denece M. Audette, Sarah H. Baldwin, Charles S. Evans. SECOND ROW: William F. Farley, John A. Galen, Oliver F. Chaplin, Donald R. Schmidt, Max A. Hohnbaum, Gerald L. Newberry, James R. Mace, Paul E. Hyde, Robert M. Soden. THIRD ROW: James L. Sartin, Charles R. Porterfield, James E. Rutledge, Robert R. Skill, Edwin A. Woodworth, Jack W. Buhler, Robert L. Steinhauer. FOURTH ROW: James A. Hansen, Raymond W. Nordstrom, Howard P. Burrelle, Dale L. Darling, Leslie H. Willms, Robert G. Glass. (More on Page 95.)



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Bulletin No.

201 Process and Equipment for Making Bleach Liquor for Use Without Settling

211 Chemistry of Bleaching Chemical Wood Pulps

214 What Do We Know About Bleaching?

236 Importance of pH and Catalysts in Bleaching Operations

242 Production and Use of Unsettled Bleach Liquor

243 Procedures and Brightness Grades in Bleaching Sulfate Pulps

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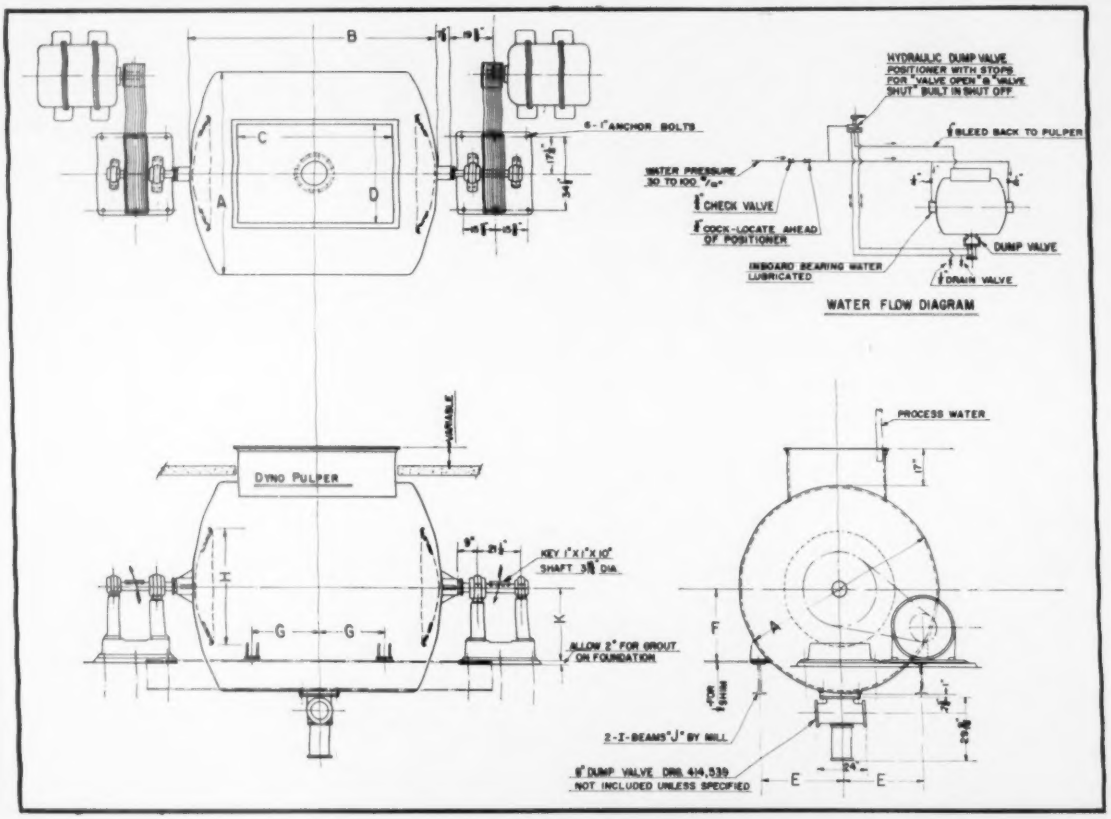
SECOND YEAR CLASS—(SECOND PICTURE)—FIRST ROW, l. to r.: John C. Barnes, Harold E. King, Robert B. Trosper, T. J. Wagner, Archie I. Otnes, Theodore J. Morris. SECOND ROW: Bernard D. Ritchey, Homer J. Baldwin, William R. Thomas, James B. Kitchell, Charles T. DeVoe, Everett A. Fitch, Richard S. Chisum, Willard L. Carlson. THIRD ROW: Kenneth M. Bethune, William E. Scott, Donald W. Moritz, Roy D. Pearson, Richard J. Zak, John D. Elder, James Robinson, Roland G. Harris. Students not in picture: Charles J. Bloch, Ralph A. Bold, Edward J. Feise, John M. Gant, John C. Gfeller, Harold E. Hickam, Theron L. Hicks, Richard H. Kuhn, Walter E. Logsdon, Ashton D. Marcus, Forrest D. Martin, Donald E. Robins, Melvin L. Tietz, Walter Gill, Lawrence Leverman.

FIRST YEAR CLASS—(FIRST PICTURE)—FIRST ROW, l. to r.: Jack C. Frosh, Ivan P. Rasmussen, Luella M. Klaas, Georgia A. Platt, Jeanette H. Baldwin, Howard E. Baldwin, George J. Schiesl. SECOND ROW: Robert M. Samuels, Charles E. Gardner, James E. McCourt, Morgan J. Rees, Franklyn M. Whitney, James E. Rutledge, L. Sloss, James C. Anderson. THIRD ROW: Richard G. Lowe, Lloyd D. Johnson, Homer Arestad, Edmund H. Wagner, Charles O. Luchterhand, Herbert Bottemiller, Jack R. Sease, George E. Schmelzer, James W. Rock. FOURTH ROW: Rex R. Morris, Fritz K. Hess, Donn E. Nissen, Ross L. O'Brien, David S. Platt, Willard W. Sanders, Marvin S. Barger.

FIRST YEAR CLASS—(SECOND PICTURE)—FIRST ROW, l. to r.: Philip L. Moser, Reuben V. Brown, Philip W. Leeds, Donald A. Mahre, Hollis W. Fleishman, Glen H. Highley, Gerwin P. Dayton. SECOND ROW: Robert W. Fishburn, William P. Carr, Wesley R. Souply, Therone I. Faris, Ivan J. Townsend, Donald E. Clearwater, Charles R. Dahl. THIRD ROW: Edward S. Karbonski, Daniel C. Leary, Harold D. Thew, Arthur W. Hagen, Kenneth W. Wind, Ralph H. Brothers, Elwyn W. Stroup. Students not in picture: Robert E. Back, Paul H. Buhman, Earl L. Cross, Ted A. Cross, William F. Cyrus, Vance L. Germany, Richard J. Keefe, James B. Palmer, Ross Petrie, Dell J. Russell, A. Ward Soult, Horton P. Westler, Leo S. Wood, Lillian S. Bentley, Patrick J. Lawless, Russell E. Lawton, Jr., Lynn R. Wilson, Charles W. Davidson.

DYNOPULPERS AND DYNOMIZING EXPLAINED



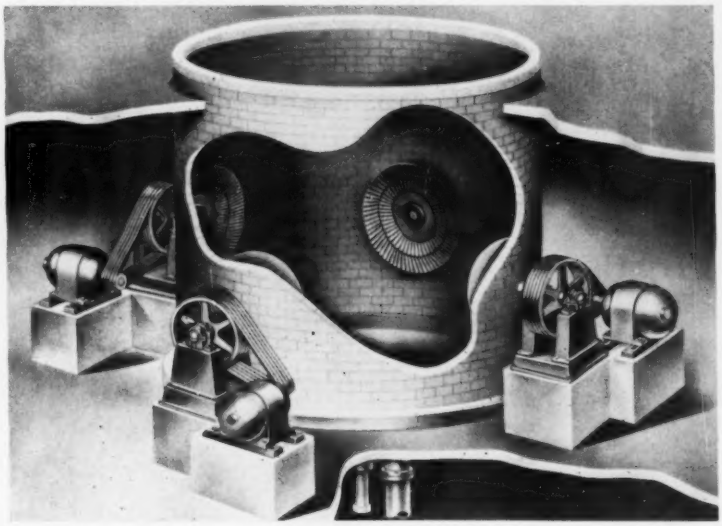
"Dynomizing" Principle

Above is a diagram of the Dynopulper—at right is a cut-away view of it. This is another of the new or more modern machines described at TAPPI sessions of Paper Week 1951 in New York (see Page 98 of our April issue for several other pictures and descriptions of equipment that made bows at the Paper Week technical sessions).

A principle, described by the coined word "dynomizing," is used in a process for pulping waste paper and pulp, as it was outlined by G. A. Peterson, Rice Barton Corp., Worcester, Mass., in an address before the Papermaking Materials session.

Used in connection with various types of Dynomachines, built by Rice Barton, the term refers to an exclusive treatment of fibers by two or more Dynopellers. The latter consists of a cup disc mounted on a horizontal shaft and inserted in the vertical ends of a vat. Diamond-hard sharp particles are welded in 10 inch strips at the periphery of the disc on the concave side.

Acting in the same manner as a centrifugal pump impeller, the Dynopeller draws the stock to its center as it rotates. The stock is drawn across the face under slight hydraulic pressure, thus working on the fibers with a pulling action which does not, Mr. Peterson stated, cut or shorten the fibers.



International Fair Plans in Brussels

At the Brussels International Fair, April 21 to May 6, the weekday mornings will once again be reserved for trade buyers, according to a release addressed to the North American pulp and paper industry by the sponsors.

Judging by requests for information received, a very large attendance of foreign visitors is expected. Many reservations have been booked.

To celebrate the Fair's jubilee, various receptions will be organized, such as the grand inaugural soirée.

Coast Will Need More Paper in 5 Yrs.

R. A. McDonald, Crown Z executive vice president, in presenting pins to 197 Camas mill employes in April, said population in the Far West has grown faster than has the industry during the past 10 years—in spite of the extensive expansion of production in the Pacific Coast mills.

He predicted that in perhaps five years his own organization will find it more difficult to meet the demand for paper products than it now does, unless it is then producing 500 tons more per day than at present of the same products—excepting news.

Frank A. Drumb, resident manager of the CZ Camas plant, stressed to pin recipients the importance of good employer organizations giving opportunity for advancement, job training, etc. H. E. Burdon, office manager, was master of ceremonies.

J. VERNE WALLACE, Tissue Machine Tender at Camas, Wash., plant of Crown Zellerbach Corp., receives 45-yr. pin award from Executive Vice President R. A. McDONALD.

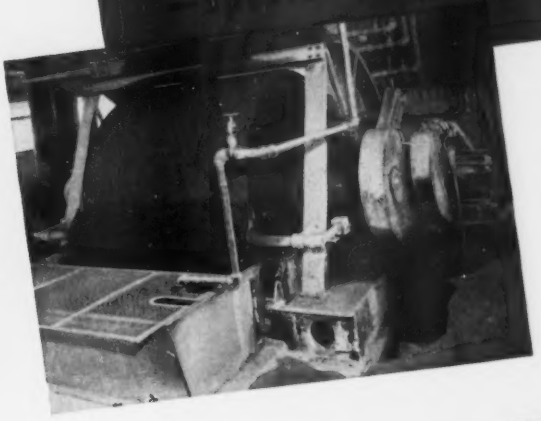
E. P. STAMM, logging manager of Crown Zellerbach Corp., Portland, Ore., has been elected to the board of directors of the American Forestry Association, Washington, D.C.

ROLAND FORTIER (left) Pulp Mill Supt. and Chief Chemist of the new Pulp & Paper Division of Potlatch Forests, Inc., Lewiston, Idaho, started career in Berlin, N. H., and EVERETT WALLACE (right), raised in Lewiston, is Chief Electrician for all Potlatch operations.

WYLIE & DAVIS, San Francisco and Los Angeles paper mill representatives, have taken over the West Coast sales agency for The Martin Cantine Co., Saugerties, New York.

For

SWENSON LIME MUD FILTER



- Washes lime mud to less than 1% soda content
- 55% to 60% solids in the washed mud
- Sturdy, stainless-protected construction
- Practically automatic in operation
- Extremely low maintenance cost

Described in Bulletins D-100 and D-108—sent free on request

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- Evaporators
- Pulp Washers • Deckers • Filters
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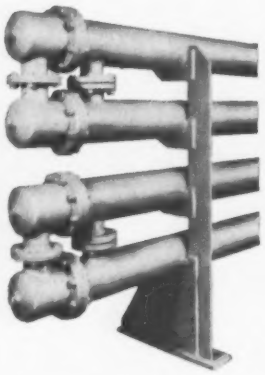

Full Contra-Flow Multi-pass Heat Exchanger Assembly

Stainless Steel Spray Liquor Coolers for Absorption and Cooling Towers

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"Since 1913"

Seattle Wash.

Personals

Pacific Coast Notes

ANTHONY P. SIEBERS has left the Springfield, Ore., kraft mill where he was the paper mill superintendent since before its startup in late 1949, and has moved back to his former home town, Longview, Wash. Prior to going to Springfield, he was paper mill superintendent for Longview Fibre Co., having gone there from Thilmany Pulp & Paper Co., in Kaukauna, Wis., where a brother is a superintendent now and others of his family are on the staff. Mr. Siebers, who said he had no definite plans for the future as this issue went to press, is living at 1847 Nichols Boulevard, Longview.

ROBERT W. STEVENS, former Los Angeles box plant manager and now consultant, was recently in Quebec in line with his new work

GEORGE W. DONALD, manager of Western Waxed Paper Co., division of Crown Zellerbach Corp., North Portland, Ore., is newly elected president of Columbia-Edgewater Country Club.

L. R. SHERLOCK, was named chief chemist of Fir-Tex Insulating Board Co., St. Helens, Ore., with resignation of *JOHN E. ROBISON*, now representing Kelco Company in Oregon and Washington.

EDGE WENNBERG, paper mill superintendent, Columbia River Paper Mills, Vancouver, Wash., has moved himself and family away from his Columbia River bank home to a new residence in North Vancouver at 700 West 44th.

Charters' Sons In Service

George Charters, assistant resident manager, Crown Zellerbach, Camas, Wash., and Mrs. Charters now have three sons in the service—two of them veterans of World War II.

Son George, who was an engineer at C-Z Lebanon, Ore., mill on the new ammonia base project there, has gone to Fort Gordon, Ga., as Army Signal Corps first lieutenant; son John is a 2nd lieutenant, Ordnance Dept., Fort Holabird, Md., and they are both "vets." Son Bob, graduate of Notre Dame, has joined the Navy, is in the electronic technical school at Treasure Island, Calif.

ROBERT PETRIE, Pacific Coast representative for Black-Clawson and Shartle-Dilts, flew to Australia where he had business engagements. Mrs. Lillian Petrie, his wife, accompanied him.

JOSEPH A. STEWART and *LAWRENCE BLAIR*, both formerly machine tenders, have been promoted to papermill tour foremen at Crown Zellerbach Corp., plant at Camas, Wash. Mr. Stewart has taken over the position on the tissue end left vacant by the retirement of *OTTO PIERITZ*, and Mr. Blair on wrapping end, filling vacancy resulting from retirement of *WILLIAM H. VILAS*.

E. STERLING SKINNER, assistant chief engineer, Beloit Iron Works, Beloit, Wis., visited the Northwest mills for two weeks in April. While at Camas, Wash., he gave a talk for the Crown Zellerbach Corp., mechanical advisory committee. He was accompanied by Mrs. Skinner.

ELMER HENDRICKSON, formerly in charge of salvage department, and *HARLEY MILLER*, of oil department, both of Crown Zellerbach Corp., West Linn, Ore., were presented 50-year service pins in April at San Francisco. Both retired.

JAMES SENNETT ORR, Northwest division manager for Pioneer Flintkote Co., Portland, Ore., plant, died Mar. 17 after a long illness. Born in Pittsburgh, he had been with P-F since 1934.

J. B. HICKMAN, Seattle, has been named special representative of Griffith Rubber Mills in the Puget Sound area, according to Zina A. Wise, president of the Portland, Ore., firm. The appointment enables Griffith Mills to give more prompt service to customers in Northwestern Washington, Mr. Wise indicates. Mr. Hickman has been in merchandising in the Pacific Northwest for 16 years. He was with Kohler Co. until the start of World War II when he went :nto war production work.

WALDO J. MORDINI has been named engine sales supervisor for Caterpillar Tractor Co.'s western sales division, headquarters at San Leandro, Calif. He attended Virginia, Minnesota, Junior College, University of Minnesota and General Motors Technical Institute, graduating with a degree in industrial engineering.

J. J. SIMKO, for six years in charge of western division engine sales, has been promoted to assistant manager, sales engineering division of Caterpillar, headquarters at Peoria, Ill.

HUGH G. GARDNER, a microbiologist and a graduate of the University of Washington, has joined Pacific Coast Supply Co., in Portland, Ore., *JOHN FULTON*, manager, announced. Mr. Gardner will devote his time primarily to toxicants for slime control. He was born in Missoula, Mont., and commanded a PT boat in the South Pacific in World War II.

H. J. ANDREWS, Pacific Northwest regional forester, U. S. Forest Service, Portland, Ore., was killed in automobile-truck crash Mar. 24 at Franklin Park, Va., while east to attend a meeting of foresters in Washington. Mr. Andrews came to Oregon from Michigan in 1930.

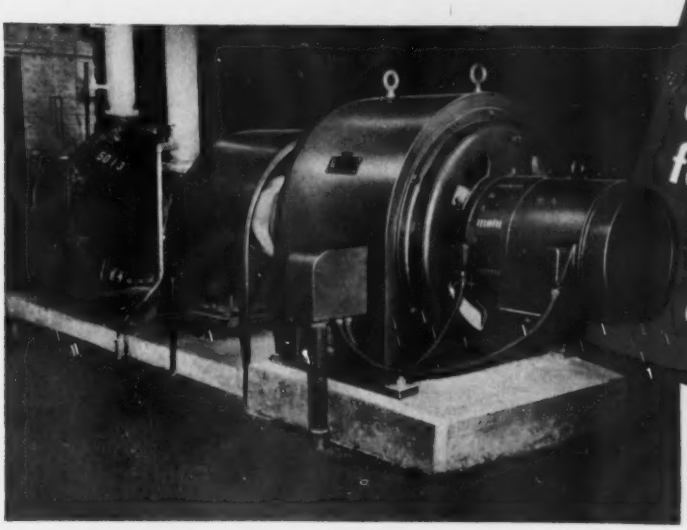
REESE KERN, technical assistant to the pulp mill superintendent, was called up in March by the U. S. Marine Corps in the rank of first lieutenant. His leaving resulted in the following temporary promotions: *E. C. SHERMAN*, former Technical Supervisor, to acting technical assistant to the pulp mill superintendent; *ROBERT MARRIOTT*, former assistant technical supervisor, to acting technical supervisor; and *KENNETH SHOLD*, former junior chemist, to acting assistant technical supervisor.

T. R. PROBST, recently appointed as assistant to general manager of Oregon Pulp & Paper Co. and Columbia River Paper Mills, has moved his wife and daughter, Patsy, from Dixfield, Me., to their new home at 9304 S.W. Meadow Lane, Portland 1, Ore.

PRESTON VARNEY, sulfite mill shift superintendent, Weyerhaeuser Timber Co., Longview, Wash., recently flew to Fort Bragg, N.C., there joining other executives of Aerocar Inc., of which he is a director. Army field forces testified Aerocar's "flying automobile" for possible military use there. He subsequently accompanied the plane unit to various points in the East, including Washington, D.C., where it was displayed at the Pentagon.

GERALD HOUGH, project chemist, has been promoted to shift superintendent of kraft mill, Pulp Division, Weyerhaeuser Timber Co., Longview, Wash., filling vacancy occurring when *GEORGE WEYERHAEUSER* transferred to the Springfield, Ore., Lumber Division. *RALPH IMESON* has been promoted from sulfite cook to shift superintendent of sulfite mill at Longview, Wash., filling the vacancy resulting from the death of *ROBERT H. HEUER*.

ELLIOTT SYNCHRONOUS MOTORS



a new high in dependability for pulp and paper mill drives—

Bracket type Elliott Fabri-Steel synchronous motor driving Jordan.

Whether you need synchronous, squirrel-cage, wound rotor, or direct current motor drive,

Large, easily accessible conduit boxes are standard on all Elliott motors. Drip-proof box above plus long leads and clamp-on type connectors make connections a simple task, and provide adequate protection. Splashproof type conduit boxes also available, providing same ample size and ease of accessibility.

Select ELLIOTT—because

● **Long established reputation**—manufacturers of dependable motors and generators for over half a century.

● **Pioneering achievement**—many outstanding features in motors today originated in Elliott Engineering Department.

● **Advanced engineering**—completely re-designed line of motors and generators since World War II. The new FABRI-STEEL design provides:

New bumpproof strength . . . Rigid, light bearing brackets . . . Ease of accessibility . . . Improved ventilation . . . Reduced maintenance cost. Write for descriptive bulletins.

L-810

Elliott FABRI-STEEL MOTORS AND GENERATORS

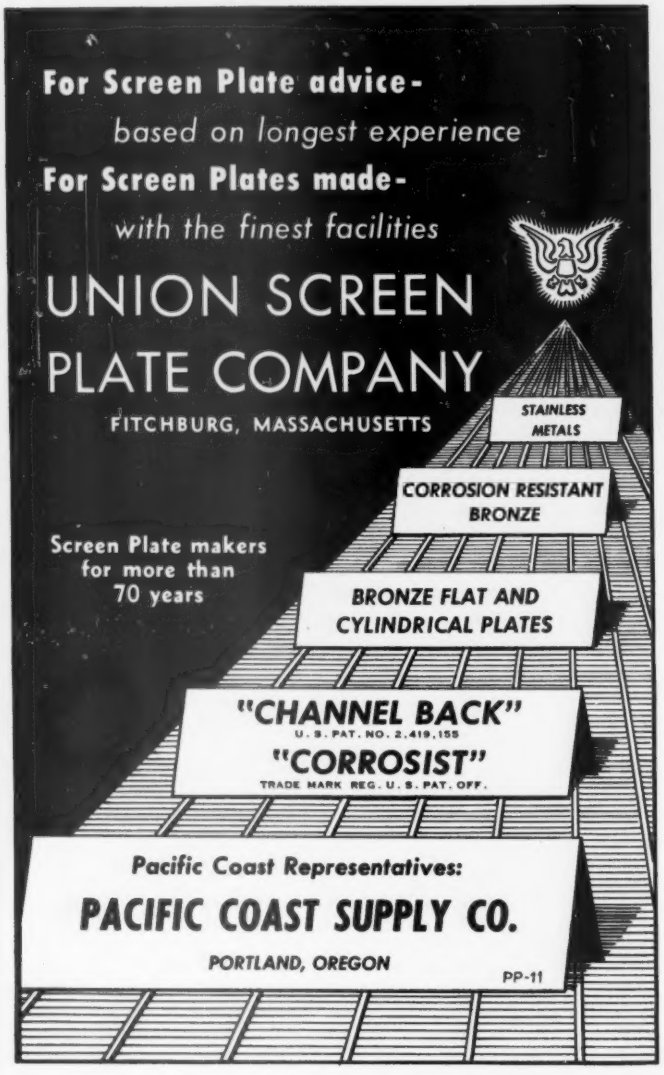
ELLIOTT COMPANY

RIDGWAY DIVISION • RIDGWAY, PA.

Plants at: Jeannette, Pa. • Ridgway, Pa. • Ampere, N.J. • Springfield, O. • Newark, N.J.

DISTRICT OFFICES IN PRINCIPAL CITIES

The Third Annual Pacific Northwest Industrial Waste Conference in Pullman, Wash., recently heard what Pulp and Paper mills are doing to control pollution from these experts (left to right): Dr. W. W. MOYER, Director of Research, Crown Zellerbach Corp., Dr. H. W. BIALKOWSKY, Director of Research, Pulp Div., Weyerhaeuser-Timber Co.; Dr. WILLIS M. VAN HORN, Institute of Paper Chemistry, Appleton, Wis.; Dr. G. G. MARRA, Wood Technologist, Wash. State College, and N. W. COSTER, General Superintendent, Soundview Pulp Co.



Industrial Waste Meeting in Far West

The 3rd annual Pacific Northwest Industrial Waste Conference, held Mar. 22-23 at Washington State College, Pullman, Wash., effected a get-together of federal and state agencies and various industries. The meeting objective was to see what might be done to eliminate wastes and conserve water. Prime participating industries included pulp and paper, mining and canning.

The pulp and paper section, chairmanned by Dr. W. W. Moyer, director of research, Central Research Department, Crown Zellerbach Corp., Camas, pointed out progress the industry is making, its importance and its effects.

A paper, "Industrial Waste As Related to Sulfite Pulp Mills," co-authored by L. S. Burdon, vice president, and N. W. Coster, general superintendent, both of Soundview Pulp Co., was presented by Mr. Coster. A paper on S.W.L. disposal methods throughout the U.S. by Dr. Harry W. Gehm, technical director of National Council for Stream Improvement, was read by R. P. Logan, Western representative.

D. W. M. Van Horne, Institute of Paper Chemistry, presented a paper on biological aspects.

WILLIAM G. SCHOLL (left), new General Sales Mgr. of Allis-Chalmers Mfg. Co. Tractor Division, who was Eastern Sales Mgr. of the division since 1947. Born in Blissfield, Mich., joined Allis-Chalmers in 1936.

JOHN E. CARROLL (right), General Sales Mgr. of American Hoist & Derrick Co., who was elected by directors to Vice Pres. of Sales. Graduated U. of Minnesota, joined American Hoist in 1937, traveling Texas, Chicago and West Coast.

Gardner Announces Contest for New Emblem

The Gardner Board and Carton Co., of Middletown and Lockland, O., will conduct three design contests with cash awards totalling $750, to select a new emblem for its products, which will have eye-appeal and will also identify the company to the general public.

Two contests are for students of Dayton Art Institute and the Art Academy of Cincinnati. But the third is open to the general public and employes. In each one the first prize will be $200 and the second prize $50.

Entries will be judged by the company on the basis of originality, uniqueness, adaptability to the company's business and eye-appeal. Entry blanks may be obtained by writing the company's Public Relations Office at 407 Charles St., Middletown, O. All entries should be mailed in with official entry blanks.

1881 OLD TIMERS 1951

SIXTY SEVEN YEARS IS A LONG TIME

As we look back and count up and re-count the friendships won and held during this time—we know our business policy is correct. This policy is—To offer a lining and tile tank service of the highest character obtainable—priced on a just, reasonable and equitable basis. In short, there is no juggling with figures so as to give "a little more for a little less".

We shall continue to base our quotations on a lump sum contract, under which Stebbins supplies all required materials, supervises the installation and turns the completed job over to the customer ready for use. On this basis our service is always dependable and trustworthy.

There is no substitute for "Know-how" based on years of experience.

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FOR PULP AND PAPER MILLS

PHOSPHOR BRONZE - MONEL - STAINLESS STEEL

AVAILABLE IN A BROAD RANGE OF CONSTRUCTIONS AND ALLOYS FOR CYLINDER FACES, SAVE-ALLS, DECKERS AND THICKENERS, FILTERS AND WASHERS

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Call your
felt man into
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YOU, Mr. Superintendent, are probably so busy meeting the production demands of your Sales Department that you've had little time to put your planned mill improvements into effect.

Machines are running faster these days. New fillers . . . clays, ash, pigments . . . are used. New surface finish materials are called for. Each one can be a new problem in removing water fast enough to keep a sheet running at top speed with a minimum of broke.

A short talk with your Hamilton Felt Man might lead to considerable improvement simply with a change of felts.

Make your Hamilton Felt Man responsible for selecting the "right" felt. Then check your production records for improvement.

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Right design—*right* construction—*right* installation are all of prime importance in a Black Liquor Evaporator. For more than 69 years our company has specialized in the development and manufacture of efficient, durable evaporators which have earned a reputation for exceptionally high standards of performance. GB's large, modern, fully equipped plant and experienced organization are equipped to handle any type of installation from the engineering to the finished job. Our engineers are available on request to discuss your modernization, expansion, operation and maintenance problems without cost or obligation.

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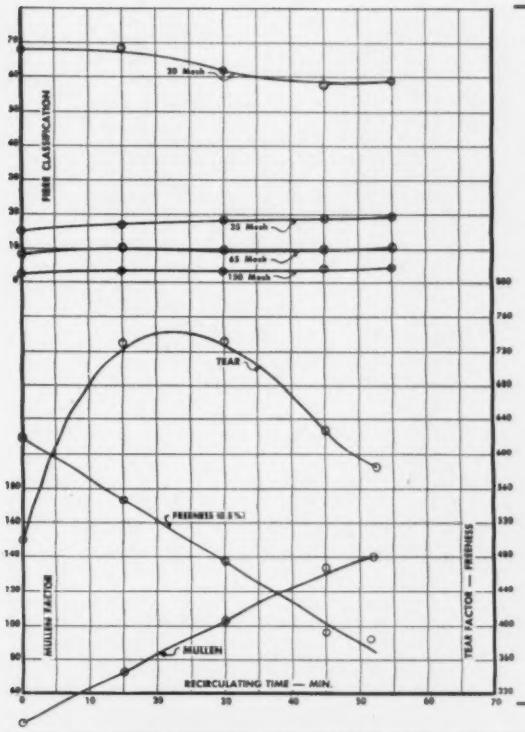

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175 HP—400 RPM

"Bleached Southern Kraft Pulp"

Rate: 8000#/Hr. — 3½% Con.
15' Req'd to Pass 2000#

Pulped Stock pumped from Chest (1) to Claflin to Chest (2) and from Chest (2) to Claflin to Chest (1) insuring uniform treatment.

THE HERMANN MFG. CO.

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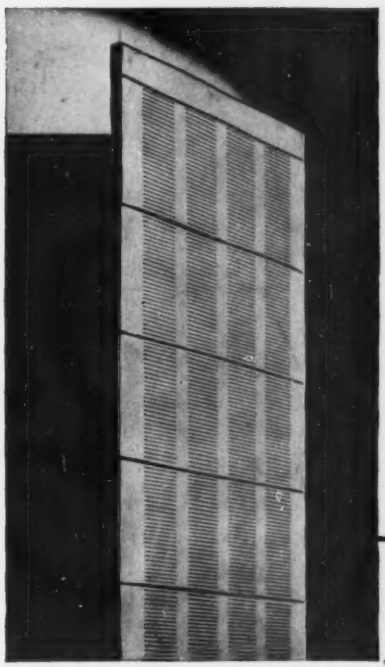

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30,000 FABRICATED SCREEN PLATES

Are Now In Service

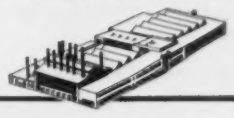
"Hardy" fabricated screen plates, made by Magnus, have a high-strength, thin-sheet design—specially engineered for maximum flow. That's why you're sure of these 3 service-proved advantages:

1. Increased Plate Capacity—The thin sheet eliminates relief milling, and with recommended arrangement, substantially increases capacity per plate.

2. Longer Life—Slots remain sharp, side walls highly polished for the life of the plate. There's greatly improved corrosion resistance.

3. High, Sustained Yield—You get consistent, uniform quantities of cleaner pulp.

It all adds up to improved performance at reduced operating costs. Complete information is yours on request. Or if you like, we'll gladly have an engineer call.



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Metalworkers for the Paper Trade

SCREEN PLATES: BRONZE, CHROME-NICKEL-STEEL, AND INCONEL
VALVES: GATE, SWING CHECK, BLOW, GLOBE, ANGLE AND "Y"

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..when it comes to Pumping Stock!

No one style of pump can efficiently handle *all* types of paper stock. That's why Fairbanks-Morse developed two types of impellers for paper stock pumps.

Figure 5460P pumps have open impellers . . . the ideal type for handling clean, homogeneous stock of heavy consistencies.

Figure 5460 pumps have the famous two-vaned, closed impellers . . . best for handling fibrous and stringy stock.

In either style, Fairbanks-Morse Pumps give you the efficient, economical, dependable performance that characterizes all Fairbanks-Morse Pumps. Remember, for every paper and pulp mill need, there is a Fairbanks-Morse Pump that will exactly meet your requirements. For pump selection assistance, see your Fairbanks-Morse pump dealer, branch pump engineer, or write Fairbanks, Morse & Co., Chicago 5, Ill.

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RUBBER COVERED ROLLS of every type and size can be handled by Griffith Rubber Mills specialists. Pioneers in the field, Griffith has developed new methods and specially designed machinery to give superior service. At Griffith the only machinery in the West for multiple drilling of suction rolls is available.

TANKS, PIPES, FITTINGS and other equipment are protected against chemical attack, contamination, rust and abrasion by Griffith installed protective rubber coatings. Rubber linings specially developed to meet the needs of the pulp and paper industry add years of service to irreplaceable equipment.

DOCTOR BLADES and DECKLE STRIPS manufactured by Griffith Rubber Mills are made from rubber compounds specifically developed to give greater efficiency and longer life.

Pulp and paper mill rubber requirements are a specialty with Griffith Rubber Mills. The complete facilities of our research department and testing laboratory are available to develop solutions to your special industrial problems.

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Don't take chances descaling Fourdrinier wires with raw commercial acids. Play safe! Use Oakite Compound No. 32. This fast-acting compound, inhibited against attack on metal, dissolves scale without etching, without brightening the wire. Does not affect wire diameter. Leaves mesh dull . . . assures clean, even pick-up. And it prolongs wire life.

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Technical Service Representatives in Principal Cities of U. S. & Canada

Red Ray Burners

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Drying Capacity

Red Ray Burners are extremely adaptable; they can be operated on natural gas, manufactured gas, butane or propane.

Controls and safeguards are furnished as required by the specific installation.

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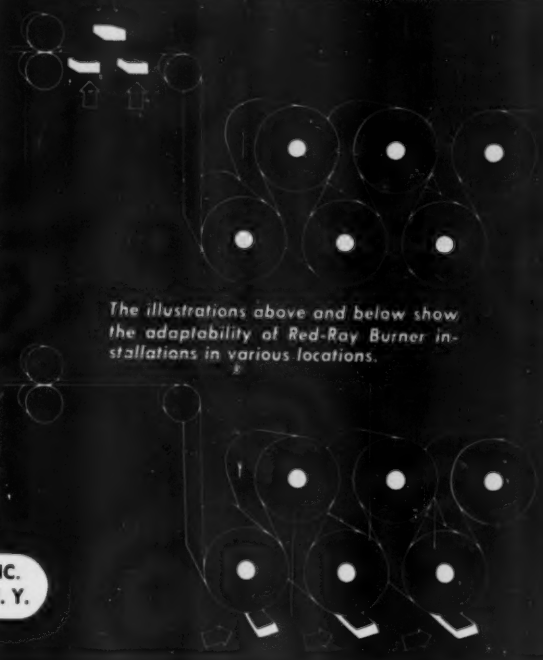

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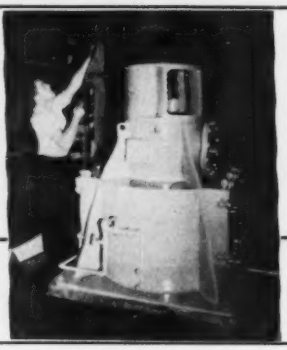

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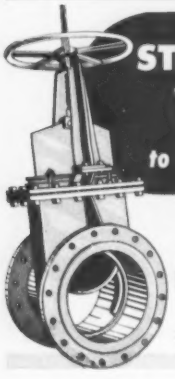

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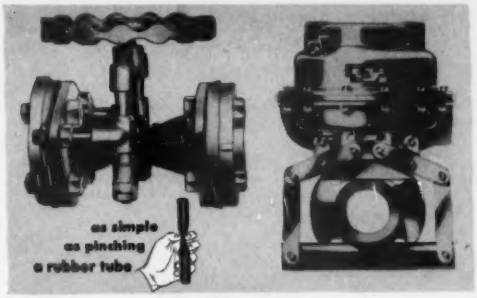

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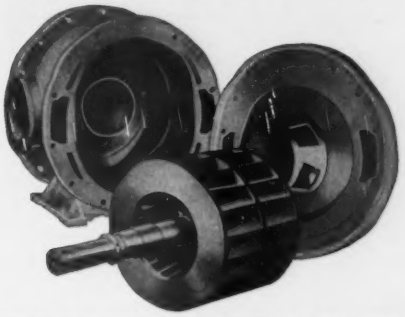

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